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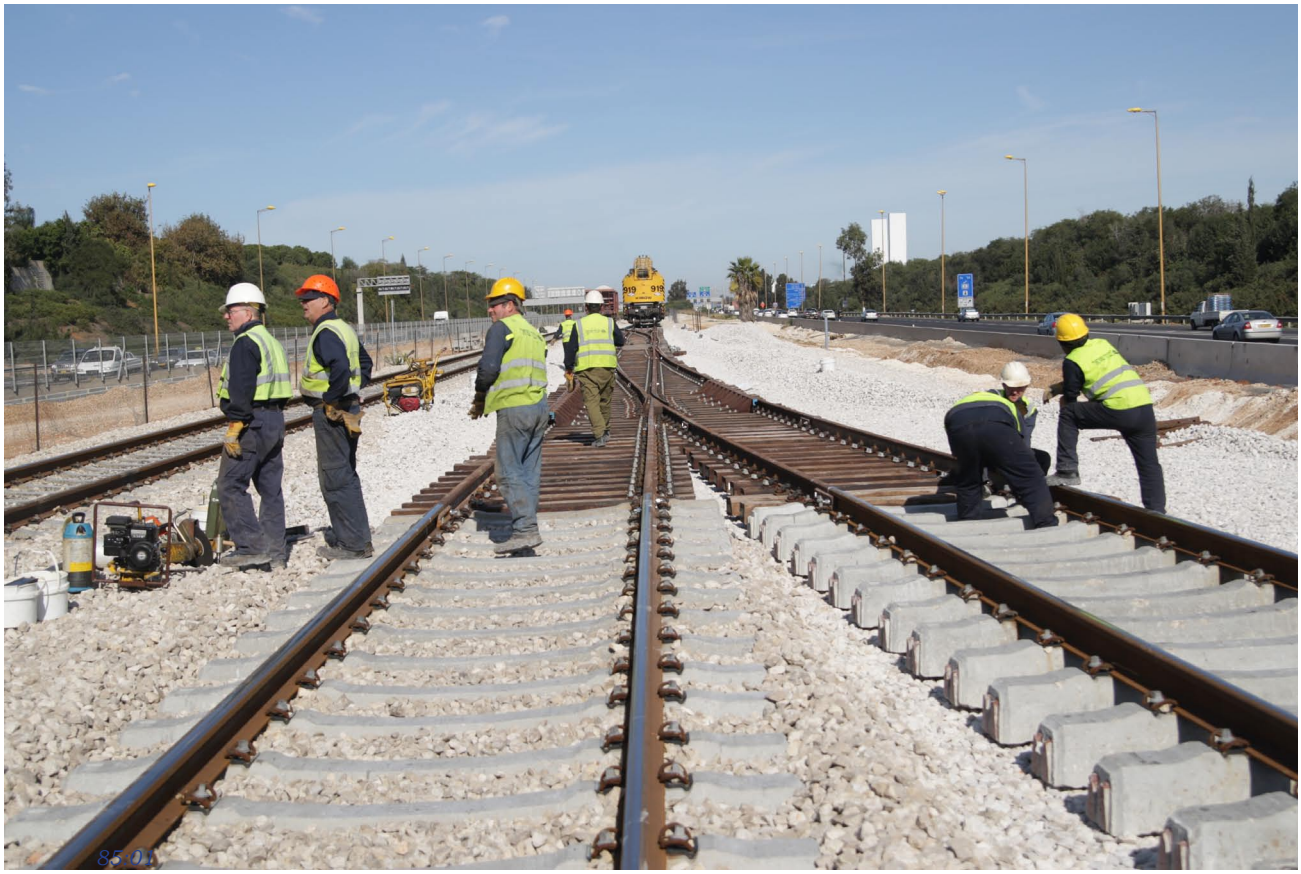
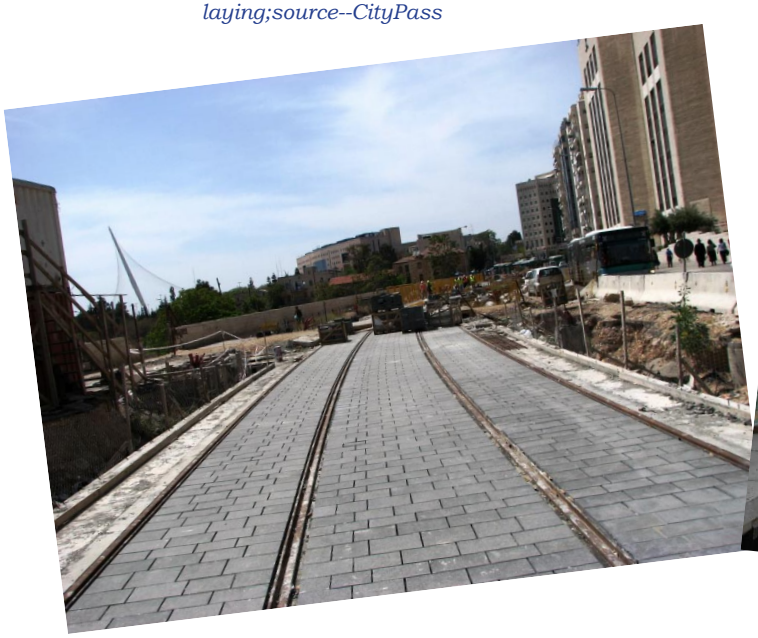
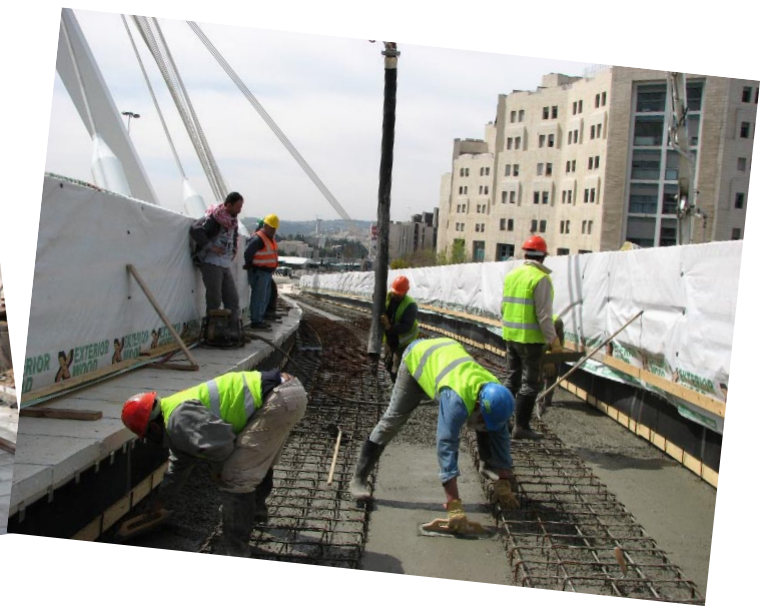


Above: Re-laying pointwork at TEl Barukh junction, Tel Aviv. Aharon Gazit.
Lower left:Progress in paving works at the western part of Jaffa Street in Jerusalem; source-CityPass; photo-Ashtrom
Lower right:Casting concrete on the Calattrava bridge of the Jerusalem LRV Red Line, as part of track laying;source--CityPass





EDITORIAL.

This issue, originally due out in June, has been delayed partially by a complete computer collapse, which led to some data being salvaged (eventually) from the damaged Hard Disc - but a new computer needed to be acquired, with (of course) different programmes..... Two whole weeks were spent in the salvage efforts and I am still getting used to the new machine (cannot work out where the coal and water go.... - and the hole for the clockwork key is also missing.) Annoyingly, it doesn't seem to like working with the back-ups on the external hard drive (thank goodness there was one!) or with my laptop. Some items did get lost, despite trying to go through old e-mails to find what had once been copied. Just as annoying is the attitude of various computer experts who all seem so obsessed with the technology and the jargon that they cannot empathise with a poor old technophobe who was quite happy with the system he had, thank you, and had really no desire for a super-duper but essentially unhelpful replacement. Now I feel like someone living near to a wayside station that has just been closed, but instead have the prvilege of watching much faster and sleeker trains whizz unattainably by. That's 'Progress'.

So this issue is a bit of a haphazard compromise – not much on Jerusalem trams, nothing at all seems to have appeared this quarter on the Hedjaz railway... nevertheless, there is much to report and a schedule to try to maintain..

Rather than writing a new Editorial, here is one which appeared (in severely shortened and altered form) in 'Backtrack' for April 2009; Though specifically describing British experiences, the ideas underpin the whole philosophy of 'Harakevet' as well. :-

MEN IN SWEATERS.

It is a sobering thought for me that I, born in 1954 and now aged 55, am one of the youngest people around who can remember "Steam on British Railways" - being 14 in 1968 and equipped with my first Instamatic. Even then the memories as a young teenager are few and geographically limited - to Ivatt 4MT Moguls at Manningham shed in Bradford, 9F's at Shipley, a ride in a Calder Valley dmu past 8F's at Sowerby Bridge, the Fairburn 2-6-4T's hauling Bradford portions of Kings Cross trains out of Bradford Exchange.... and when I took a job in Germany in 1973, in Hamburg, that was just in time to see the last DR 01.5 Pacifics on the Interzonenzüge, but everything else, the DB locos, were standing dead and rusting in the depots at places like Rothenburgsort.

And now that my own childhood and youth have become a part of History, and looking back gets more difficult, I have joined the ranks of those grey-haired middle-aged men who read and write articles on railway history from whatever perspective they wish or can - some concentrating on Home railways, some on Foreign ones, or Military ones, some on Modelling, whatever. We are the Men in Sweaters and cardigans who meet from time to time at whatever forum is appropriate, an Exhibition or a Conference or an Open Day or a Museum Railway Gala, and exchange opinions and publications.

I don't mind. I think this is normal, and all right.

Of course, I am one of the youngest, and at the other end of the scale well-known names tend to leave the group with distressing frequency. Names one has known for decades from book titles or photo captions, names with which one grew up.... There are so many photos from the 1950's and 1960's in which earnest young men in smart trousers and horn-rimmed spectacles and laden with cameras walk around weedy closed stations while their special train, hauled by an ancient 0-6-0 and emblazoned with a headboard from the SLS, RCTS, BLS, CURC or whatever, or maybe even a brake-van special with an ancient tank loco, stands simmering in the background. I just missed being a part of that generation. Then these people grew to manhood, had families and jobs..... and now many of them are at the far end of the sequence. Whatever that means. For some it means they have time to put to use all those negatives and notes, all those diary entries and notebook entries. For some it means that a lifetime spent writing histories of obscure lines or loco classes can at last lead to an article or book being published - modern technology makes it easier and cheaper - and the knowledge they have gathered can be placed 'in the public domain'. Unfortunately, for some it means they will now never get around to producing or finishing the book they have dreamed of.

There is a vast corpus of amateur history; Professional academic historians may sometimes sneer at the quality of 'enthusiast' offerings but much is of extremely high standard. Detailed lists of manufacturers and their products, photographic coverage of various bits of intact or abandoned infrastructure... none of this material would be available at all if someone, somewhere, had not collected it, preserved it from destruction or loss and then made it available. And that is our great reward, we Men in Sweaters. We know that, whatever else happens, we have put the information somewhere where - hopefully - someone else can in due course pick it up and take the trail further. But we know that this hypothetical future colleague, perhaps right now still in short trousers and unaware of his destiny, would be unable even to start his own researches if we had not done this groundwork first.

There is no glory in this work, and certainly no financial reward. It is a hobby, an interest, maybe even an obsession. But it has been important. I do not regret it.

As a slightly younger man I interviewed quite a few elderly men in cardigans and wrote down what they reminisced about their work and their travels and borrowed gratefully their photos for copying.... and now many of them are gone and the information is in my own archive, not theirs. My doctoral thesis on railways in the Middle East in the 1940's, the magazine I publish (on Middle-East Railways), or articles I have published in a few enthusiast magazines and newsletters, without any payment of course - or items I translate from German and Dutch sources so that they become available to the English-speaking researcher - these are additions to The Fund of Human Knowledge, a vague concept in a world in which digitalised data appears to hang suspended in Interspace for decades and can be called up - or infected or deleted - at the press of a button. (This is why I still prefer Hard Copies.)

The process repeats cyclically. In ancient copies of ancient magazines one can read the reports of those interested persons, not all of them technically trained, who bothered to write down what they saw, who recorded their journeys with a stopwatch or a pencil or a cumbersome camera, and without their efforts what would we know of most of the Victorian or Edwardian railway scene? And this includes the efforts of those who, in a different technological age and without much hope of great profit, published their offerings and distributed them to a small market of like-minded enthusiasts. Already we find that in Britain the age of parcels trains, mixed freight trains, even loco-hauled passenger trains, is as far distant as the older forms of signalling. New generations grow who never saw a 'real' steam engine in normal service and - one has to admit - rarely see a 'real' diesel either. The Railway is different, but it is still the Railway and it still fascinates and now there are those who note the numbers of Eurostar units rather than Britannias or Bulleid Pacifics or Class 71 electrics on Boat Trains. And one day someone may find the information of use. Maybe more 'dross' is preserved in a period when everyone can take and send digital photographs or post to websites, but the principle is the same. Today is just History in the Making, and Yesterday is already History, and whatever has just run past me cannot be recorded or photographed again in quite the same way or in quite the same set of circumstances.

So we Men in Sweaters pore over ancient

photographic collections, postcards found in flea markets, back-numbers of old magazines, old notebooks, and we extract what we need for our current projects. Because it is important that someone does it.

In my 'other life' as a clergyman and theologian I know that we would not have a place to start if someone, somewhere, at some point, had not bothered to sit down and pen out a History of the times of the Kings or the Prophets or the Judges or (for a sister-religion) various versions of a biography of a specific Redeemer figure. What of the Classical authors, or Bede? Never mind that these texts are tendentious and polemical and do not match rigorous modern academic standards - where would we be if we didn't have ANY of it? If History began sometime in the 16th. Century?

So take heart. We Men in Sweaters are playing an important role. We are preserving what would otherwise be lost. For now. What will happen to our work in a thousand years, I would not dare to prophesy - but for us, and for those who come after us, it has an importance that cannot be measured. We take the Past seriously, and that is our contribution to the Future. Would that more could join us.....

Rabbi Dr. Walter Rothschild. Berlin, Germany."

To this I would only add - we owe many thanks to those who, before us, arranged their papers and archives and kept old papers, tickets, timetables, posters, correspondence, whatever, in the hope that someone would find them useful one day - I know I have, and this becomes a duty for us to obey for the following generations; and that I received an enquiry from a researcher into, of all things, BR Class 141 diesel units sold to Iran, who had found Harakevet partially on-line, and was able to find the relevant items in issues 50 - 58, and was Amazed at how much has happened since those issues came out - 'Harakevet' itself has become a veritable storehouse of interesting nuggets, the only problem being keeping the Index up to date!!
Enjoy!

The Editor.

85:04.

NEWS FROM THE LINE

(a). PASSENGER NUMBERS.

On 14.03.2009 Benny Attar wrote:- "A recently published Israel Railways document shows average daily figures for all 47 passenger stations on the line.

Top of the list is, not surprisingly, Tel-Aviv Central, which serves about 30,000 passengers daily. The total for all four Tel-Aviv stations is over 75,000 passengers daily. The more rural stations serve between 3000 and 6000 passengers each day. Bottom of the list is Dimona, with 95 passengers daily (that's 45 commuters, outbound and inbound - an average of less than 25 passengers per 168 seat train).

Both Jerusalem stations together (yes, there is another station at the Biblical Zoo, just before the main station) serve about 500 passengers a day. Hardly worth the effort!"

85:03.

ISRAEL: According to current projections, Israel Railways expects to carry more than 37 million passengers this year, a 5% increase on the 35·1 million handled in 2008, and more than eight times the 4·3 million recorded in 1994. Whilst the economic downturn has slowed the rate of growth, ISR believes more passengers will turn to rail as a result.

Last month the government presented its budget to the Knesset, allocating US$7·25bn for railway development over the next three years. This includes completion of the line from Tel Aviv Hahagana to Rishon Le-Ziyyon West by 2011-12, and to Plashet on the route to Ashqelon by December 2012. Double-tracking from Tel Aviv to Kefar-Sava is to be finished by June 2010, doubling and realignment of the Ramla – Be'er Sheva line by March 2011 and doubling of the Qiryat-Motzkin – Nahariyya line by September 2011.

Completion of the direct Ashqelon – Be'er Sheva line is due in June 2012, followed at the end of that year by a cut-off from Kefar-Sava to Shefayim, reducing journey times on the Tel-Aviv – Haifa route by 10 min. Around $1bn is to be allocated for new rolling stock. However, the US$1·7bn A1 fast rail link to Jerusalem is stuck in the courts following appeals by environmental protestors, and will not now be finished before March 2016. And it is not clear if the US$328m electrification programme will be completed by December 2015 as planned.

Meanwhile, Prime Minister Benyamin Netanyahu has announced a further US$12·5bn railway investment programme for 2012-20. This envisages rail links from Metula near the Lebanese border in Upper Galilee to Eilat on the Red Sea, plus revival of the Hedjaz Railway branch between Haifa and the Jordanian border. According to Netanyahu, the Israeli rail network is '200 years behind those of the developed world', and he believes that fast rail links are essential to spread economic development to the country's peripheral regions, including rail freight services to support industrial development. The proposal is being challenged by the Ministry of Finance, which favours light rail for urban areas and discounts the idea of rail freight over short distances.

(b). JERUSALEM A1 LINK TENDERS.

From a press release by IR of 09.03.2009:

Due to the national importance of the A1 fast rail link to Jerusalem, The Railways are now working intensively on promoting Tenders; one of these is for the construction of section D, starting under Khalilim mountain range (under Mevasseret, near Jerualem) and ending at the Binyanei HaUma station at Jerusalem. 80 metres under street level, though the platforms and headshunt will terminate further on at the area of the Foreign Ministry's old building. (They are for convenience listed here rather than under 'Tenders'. Ed.)

Tender HN/KB/07/08: Construction of Section D on the A1 fast rail link to Jerusalem: Works include: Excavation and/or stone cutting of the portal area, creating access roads, underground boring of the railway tunnels, connecting tunnels and an access tunnel; initial support works, sealing, final wall works, preparatory works for systems infrastructure, concrete works for various elements in the tunnels, purpose-built structures at the portals, bridge works etc.

The following structures are included:-

- Tunnel A3: Two single-track tunnels, one for each direction, each 800m long in an elliptical cross-section.
- Tunnel 4: A double-track single tunnel 2.9km. long, forming the terminus station 80m under street level at Binyanei HaUma; this then splits into two tunnels with different cross sections, at the end of which will be the 340m-long station halls with a cross section of 400 sq.m.
- Four Escape Tunnels and one Access Tunnel for the rescue services, leading to street level.
- bridge section B10.

Implementation time is 49 months, and latest bids are due 01.06.2009.

Due to the project's complexity, and the fact that no local subcontractor has the experience with vertical and diagonal tunnel boring works, each bidder must be connected with companies from abroad who are qualified and experienced in these works.

(c). TRACK WORKS MARCH 2009.

Due to various works planned, in the last weeks of March the following changes were due to take place:-

"(i). The line Herzliyya-Haifa-Nahariyya would close to traffic from 00.01 on Friday 20.03, till close of service ca. 17.20; traffic would resume Saturday evening 21.03.09. Trains to or from Nahariyya or Haifa would instead end at Tel Aviv Savidor; trains 6171 & 6174 would not operate; trains due to arrive or depart Binyamina would instead do so at Herzliyya. Tel Aviv Universita

would still be served, but not Beit Yehoshua, Netanya, Hadera West, Caesaria-Pardess Hanna, Binyamina, Atlit, Hof HaCarmel, Bat Galim, Haifa Central-the-Eight, Lev HaMifratz, Hutzot HaMifratz, Kiryat Haim, Kiryat Motzkin, Acco and Nahariyya. Works include progress on grade separations as well as replacing turnouts at Kiryat Motzkin station and at Zomet Zevulun. Work to be carried out near Netanya includes erection of bridge girders forming grade-separations at Kfar Netter (No. 27) between Netanya and Beit Yehoshua, and at Kfar Vitkin (No. 23) north of Netanya.
(ii). Modi'in Central will be closed to traffic on 20.03.09 due to various necessary works; trains will depart from and terminate at Patey Modi'in station. Traffic should return to normal by Saturday evening.
(iii). From 00.01 Monday 23.03 till 23.59 Wednesday 25.03 the line between Beersheva, Dimona and Tel Aviv will be closed for traffic to enable further infrastructure works to be carried out. 1.7km. of new track will be laid north of Kiryat Gat on a new straighter alignment, and there will be further realignments on thie section Na'an Junction - Kiryat Gat. Services due to run to/from Beersheva will instead terminate at Tel Aviv HaHaganah."

(d). TRACKWORKS MAY & JUNE 2009 - BEER SHEVA LINE.

Taken from a press release of 26.04.09 by Isra-Rail Co. Ltd.:

Between Sunday, 04.05.09, and Friday, 15.05.09, the railways were to carry out extensive works under the name 'Operation Beer-Sheva in 50 Minutes' referring to upgrading of the line Tel-Aviv - Beer-Sheva with the aim of cutting journey times between the two cities by 30 minutes - from the present 80 minutes to 50 minutes.

An integral part of the works was the 'Graves operation' at Devira (between Kiryat-Gat and Beer-Sheva), which includes linking 6 km of new alignment with the existing track, which required combined works of communication and track works consisting of ballasting, rail welding, line levelling, and road machines. The linking required simultaneous work at 3 sites on the first week, and at 6 sites on the second week. After completion of works, 8 km of newly-aligned track became operational.

Due to the existence of graves revealed on the new alignment, the originally-designed height of the track had to be changed and it has been built 3m higher; thus raising the infrastructures over the existing (lower) alignment where they cross.

Works also include excavation and removal of the old track infrastructure, and building a new embankment filled with selected material and roadbeds consisting of 20cm layers each; this had to be carried out precisely, requiring separate lab. tests for each layer, 24 hours around the clock for 10 days.

The works caused the following changes in the timetable:
On Sunday, 03.05.09, trains Nos. 129 and 131, normally terminating at Beer-Sheva at 22:43 and 23:43, terminated at Kiryat-Gat; Between Monday, 04.05.09, and Sunday, 10.05.09, all passenger trains would start/terminate at Kiryat-Gat; therefore there were no services to/from Lehavim/Rahat, Beer-Sheva-North/University, Beer-Sheva Central, and Dimona; Between Sunday, 11.05.09, and Friday evening, 15.05.09, there were no services on the Tel-Aviv - Beer-Sheva line; all trains between Nahariya, Haifa, and Beer-Sheva, started/terminated at Tel-Aviv Hahagana station; Traffic was to return to regular on Saturday night, 16.05.09.

The railways' management apologized for the inconvenience caused, while stressing that works are being intensively carried out to promote double-tracking in favour of the population in Southern Israel; the management appreciates their patience during line closures, emphasizing that eventually it will pay off.

BUT - On 08.05.2009 came a Sequel to this:

Well, this line closure did not pass without any response - as was reported by Israel's most popular newspaper 'Yediot Aharonot' ('Latest News') on 01.05.09.

Three senior persons; the Head of Negev Heights Council Mr. Shmulik Rifman, the Minister for Development of the Negev and the Galilee Mr. Sylvan Shalom, and the manager of the competing bus operator Metro-Dan, shared a common opinion - that it is unrealistic to disconnect dozens of thousands of passengers in the south from other parts of Israel for such a long period; many are using monthly season tickets and no one will compensate them for the money lost; the bus operator even said that his company cannot provide an alternative to rail in terms of carrying capacity (at least this proves the importance of rail service, which has also to compete with toll highway No. 5 A.G.); all three claimed that the railways should continue the upgrading and double-tracking of the line but with much shorter line closures than had been done so far.

The Railways' Administration did not ignore the public's fury, and already on 04.05.09, announced in a new press release, that between Sunday, 10.05.09 and Friday, 15.05.09 (i.e. a week later than originally planned), trains to/from Beer-Sheva would start/terminate services at Kiryat-Gat station; consequently, there would be no service to/from the stations of Lehavim/Rahat, Beer-Sheva North/University, Beer-Sheva Central, and Dimona. The railways would operate alternative shuttle services.

The originally planned operation of closing the line between Lod and Beer-Sheva has been postponed to a later date.

One further result that may affect future works: The recently newly-elected Transport and Roads' Safety Minister Mr. Yisrael Katz has decided that from now on, any sort of infrastructure work to take a period longer than 4 days and thus resulting in a lengthy line closure will have to obtain the approval of a special committee created for that purpose!

Further closures Kiryat Gat – Beer Sheva – Dimona were in effect Monday – Wednesday; 22.-24.06.2009. A free shuttle bus service was to be provided, departing Beer Sheva Central one hour prior to the scheduled departures from Kiryat Gat, calling at B-S. North/University and Lehavim/Rahat, tickets to further destinations being issued at Kiryat Gat. In the reverse direction buses would wait at Kiryat Gat station until arrival of southbound trains. During this period two turnouts were to be laid in the main line between Tel Nagila and Devira, including a new 400m of track – this being the first stage of a new double-track section, with the new track on the west side of the existing one. On the Devira – Lehavim section two sites were to be worked on simultaneously, including the removal of one turnout and linking the newly-laid western track with the existing one; also there will be some realignment as well as upgrading and reconstruction of existing track, and the construction of three bridges should be completed.

(e). SIEMENS STOCK INTO SERVICE.

The first new single-deck 10-coach train from Siemens (Set 802) was to be put into trial service between Nahariyya, Tel Aviv, Ben-Gurion Airport and Modi'in on Wednesday 18.03.2009 - two days later than planned - and full service from Sunday 22.03.

Aharon adds: "A news report in early May in a local newspaper in Haifa stated that "due to problems with retractable stairs on the new single-deck push/pull trains supplied by Siemens, it has been decided to operate them in one stage instead of three, but this caused reduction in air pressure in the brakes system, and in order to keep services to schedule, the railways used Spanish-built locos which are unable to pull the new trains."

This is a typical mixture of facts, only partially true, and the Railways' spokesman Mrs. Liran Gordon immediately responded: "the shortened time for operating the retractable stairs is done in order to cut stopping times at stations; it has no effect on the air brakes system; the Spanish-built locos had been purchased long before the Siemens trains were purchased, and will be used on these trains too; since the new trains are still undergoing test runs, it has been decided to have a technician from Siemens on each train in order to assist the local team whenever needed."

However, the 10-car formation of the new trains has been found to be too heavy for the Alstom locomotives, and as a result trains are running in 8-car formations until a solution can be found."

(f). WALKS AND HIKING.

IR, together with the Ministry of Tourism, have put together a package of tracks for walking. suitable for the whole family, starting from railway stations throughout the network; these include some along the Mediterranean coast, the source of the Yarkon river near Rosh HaAyin, and in Jerusalem. Details can be found in a new website which

provides the public with information and there is some attractive advertising.
http://www.rail.co.il/HE/Stations/traintrip/Pages/traintrips.aspx

(g). PROGRESS ON HOLON - YAVNE LINE.

From a press release of 24.03.2009:

"The Israeli company Shafir Civil & Marine Engineering Co. Ltd. has won the tender for building the southern section of the line between Rishon-leZion-West (Moshe Dayan station) and Peleshet Junction (also known as the Peleshet Triangle, which connects the existing Ashkelon - Ashdod - Rehovot - Lod line with the port of Ashdod.) The $17.4M project will take 33 months to complete; works are part of the project to build a continuous double-track line between Ayalon South and the Ashdod - Ashkelon line, but it is much greater importance in forming a direct link between Nahariya and Haifa in the north, through Tel-Aviv, Holon, Bat-Yam, Rishon-LeZion, Yavne, Ashdod, and Ashkelon in the south. This means that the detour through Lod station will no longer be needed; between Tel-Aviv-HaHaganah, Yavne, Ashdod and Ashkelon 9km. of line will be slashed and 20 minutes saved.

On the section between Tel-Aviv-HaHaganah and Moshe Dayan, most of the roadbed is completed, as are the stations of Moshe Dayan and Yoseftal, while the stations of Holon Gate, Holon Wolfson and Bat-Yam Komemiyut are under construction.

The section between Moshe Dayan and Pleshet Junction involves building bridges over roads Nos. 4311, 20 and 4, as well as railway bridges over the Sorek and Yavne rivers. It includes the new station of Yavne West (under construction) near Yavne Interchange (on Road 4 to Ashdod), now being upgraded to enable the line to run in a tunnel beneath the roads.

When completed, the whole line will revolutionise rail travel; it will take just 10 minutes from Tel-Aviv-HaHaganah to Moshe Dayan and just 22 minutes from Moshe Dayan to Ashdod; the traffic forecast for the line in its first year of operation is 8.5M passengers."

(h). JERUSALEM LINE TENDER PROGRESS.

Following a public tender issued by IR for a Managing Company to supervise sections B and C of the 'A1 route' fast line to Jerusalem, the winner (from four bidders) is the Israeli company Eldad & Spivak Engineering Ltd., who will provide the Railways with Management, Coordination, Planning Control, Inspection on implementation and Quality Assurance services for sections B and C. Since this is the first project in Israel ever to involve such engineering complexity as well as to such a scale, the Railways have enabled bidders to include two foreign implementation and inspection centres, one for each part of the necessary know-how, and with a well-proven experience of at least five years in Tunnelling, both in NATM (New Austrian Tunnelling Method) and TBM (Tunnel Boring Machines) systems.

Section B includes two 3.5km. tunnels (one for each track) and a small bridge. Tunnelling on this section is to be carried out with the TBM system.

Section C includes two 1.2km. long tunnels (one for each track) and two 11.5km. tunnels (likewise). The short tunnels on this section will be built with NATM (conventional) system, while the longer ones will be built with the TBM system.

The $525M project is of national importance; it will enable a travel time of less than 30 minutes between Tel-Aviv-HaHaganah and Jerusalem Binyanei-HaUma stations, with a frequency of three trains an hour in each direction at peak periods, thus reducing road congestion, car accidents and air pollution.

(i). BUT MORE ARGUMENTS ABOUT COSTS.....

The State Comptroller, Prof. Micha Lindenstrauss (a retired Supreme Court judge), published on 06.05.09 his annual report for 2008, in which he complained about cost estimations regarding the completion of the A1 fast rail link to Jerusalem, the last section of which should have been ready in 2012 at a cost of $0.76 Million, but by 2008 - after re-estimations this rose to $1.44 Billion; these costs do not include electrification and rolling stock; the total cost will therefore reach $7.12 Billion and with completion only in 2016!

He blamed the Railways, and the Ministries of Finance and Transport & Roads' Safety for the excesses over budget and schedules, adding that lessons should be learned for other future projects of similar size; He also criticized the former railways' General Manager Mr. Linchevsky, who signed the contract with Moria Co. of Jerusalem in 2006 for building the new railway station and carrying out other works, for not defining clearly enough how the responsibility and authority should be shared by each of the two Boards.

The Railways' response was that the delays and rising prices are a result of the Green Party's appeal to the Supreme Court, whilst the contract with Moria has in fact been cancelled by the present General Manager Mr. Harel.

(j). MODI'IN ROADWORKS.

Due to construction work on Road 431 near Pa'atei-Modi'in station, there was to be no access for road vehicles to the station on Monday 30.03.09 and Sunday 05.04.09.

(k). 2008 TRAFFIC STATISTICS.

On 08.04.2009 Aharon Gazit sent the following:

"The railways have recently published the summary for their activities in 2008, and here are the main points:

- Passenger traffic and revenues in 2008 were higher by 2% than the target. Overall growth of 7.5% and revenue growth of 23%.

- Journeys were up by 10.5% compared with 2007 due to the opening of new stations (Lod Ganei-Aviv, Petakh-Tikva Kiryat-Arie, and Modi'in Central), growing traffic on the line to Modi'in, abolishing the need to change trains at Beit-Shemesh on the Tel-Aviv - Jerusalem line, and shorter journey times on the line to Beer-Sheva.

- Suburban traffic was higher by 14% compared with 2007, while intercity traffic grew by 5% only due to the opening of the three new stations mentioned and the rising traffic on the suburban line to Modi'in; as a result the share of suburban traffic was 59.7% as against 57.7% in 2007.

- In 2008 the civilian traffic grew by 14% while that of soldiers by 1%; the civilian share was 77.75% compared with 75.6% in 2007.

- Regarding occupancy indexes; seat occupancy reached 59.7%, 5.9% higher than in 2007, while average train occupancy reached 297, 12.5% higher than in 2007, due to growing passenger traffic and stability in the rolling stock fleet.

- Average passenger/km reached 164,036 (in thousands), 7.5% higher than in 2008; revenues grew by 23%, while revenues per passenger grew by 11.4% as a result of 10.5% higher passenger traffic and rising fares by an average of 2.5% which started on 01.07.08.

- Regarding Freight traffic, there was a decline of 13.8% in commercial cargo haulage from 7.925 Million tons in 2007 to 6.835 Million tons.

- During the first three Quarters of 2008, the decline was due to closure of lines for developing and maintenance works on infrastructures, and strike in the ports, while in the last quarter of 2008 the reason was the economic recession. Ores were down by 21%, Containers by 8%, and Cereals by 4%; on the other hand, haulage of Sand/Garbage grew by 29%. Ton/km was down by 10% due to a decline of 13.8% in hauled tonnage.

Regarding Performance against Target, this reached 102%, which is remarkable due to the fact that during the war in the Gaza Strip there was a sharp decline in passenger traffic to and from Ashdod and Ashkelon!

(l). WHO WATCHES THE WATCHMEN?

From a press release of 26.04.09 by Isra-Rail Co. Ltd.:

"The Railways' administration has updated the criteria for employment of Watchmen (or inspectors) at level crossings. The additional criteria will also enable those who did not serve in the Army to be recruited for the job; it is clarified that the new step will not affect the original intention to upgrade the level crossings - inspection system.

As a result, the following criteria have been added:

1. Work in a company, institution, or an organization consisting of an organizational hierarchy, in a job which requires showing initiative according to an internally-defined procedures system.
2. Experience of works in shifts (day and night) of at least 8 hours on each shift, and

with self independent action (at least part of the time).
3. A continuous employment of at least 18 months at one work place.

Additionally, the Railways' management has decided to recognize the experience of 12 months of those who have already worked as watchmen at level crossings, in parallel to the experience required in the criteria.

The Railways' Administration further explain that for this work, which concerns security and safety and is aimed at taking care for human lives, the requirement of army service is relevant and specially needed due to the fact there is no experience in this job elsewhere in the world. Therefore, due to the job's importance, it has been decided that the conditions of employment will be equal to those of the Railways' security people, assuring the safety of passengers. However, following discussions, the Administration has decided that the additional criteria are equivalent to Army service, so that even those who did not serve in the army can be recruited."

(m). HULDA GRADE SEPARATION.

From a press release of 05.05.09 by Isra-Rail Co. Ltd.:

"Due to completing works on grade separation No. 217 [km 36 from Tel-Aviv on the old line to Jerusalem, at its intersection with road No. 411 near Hulda, thus replacing a level crossing], the old line between Na'an junction and Jerusalem will be closed to traffic resulting in no services between Tel-Aviv and Jerusalem on Friday, 15.05.2009 between 00:01 and 19:00; traffic will return to regular on Saturday night, 16.05.2009 at 20:15."

(n). NAHARIYA LINE WORKS.

From a press release of 06.05.2009 by Isra-Rail Co. Ltd.:

"As part of upgrading and double-tracking the line to Nahariya, the railways have recently published Tender No. HN/KB/02/09. The works to be carried out between km 21.400 and km 28.900 (measured from Haifa East; A.G.), include: preparatory works, earthworks, grade separations, drainage, supporting walls, lighting, signaling and communication, irrigating, gardening, additional platforms at the stations of Akko and Nahariya, and acoustic walls at Kiryat Motzkin.

The tender comprises two structures:

Structure 01: works to be carried out at a fixed and final price.

Structure 02: works not yet included in the final price.

Works are expected to start in September 2009 and be completed in May 2010, namely within 20 months. Latest bidding date: 01.06.09.

When completed, the $7.7 Million project, which includes a second track along 20 km between Kiryat-Motzkin and Nahariya (the section between Kiryat-Motzkin and Na'aman, south of Akko is currently under construction), will provide the railways with much greater operational flexibility, and provide a continuous double-track between Nahariya and Lod to Beer-Sheva and Dimona, to Rehovot, Ashdod, and Ashkelon, as well as through Ben-Gurion airport to Modi'in, and - at a later stage on the A1 to Jerusalem new central railway station to be built.

Whilst in 2008 passenger traffic between Haifa and Nahariya reached 2,554,686, the forecast after completion is to 3,163,941 or 24% higher. (This is particularly important due to competition from buses, minibuses, and very soon BRT services to be introduced on parts of roads parallel to the line; A.G.).

(o). ROCK SPECIALS.

Not the 'Rock Island Line', but: From a press release of 06.05.2009 by Isra-Rail Co. Ltd.:

"Due to the expected high number of fans at the Depeche Mode rock band concert to take place on Sunday, 10.05.09, at Hayarkon Park in Tel-Aviv, which is near the University station, the railways will operate after the show's end, from 23:00 and onwards, special train formations from the University station under the system of 'fill and go' to the following destinations:

- To Modi'in, calling at all Tel-Aviv stations, Ben-Gurion airport, and the 2 stations of Modi'in.

- To Ashkelon, calling at all Tel-Aviv stations, Lod, Rehovot, Ashdod, and Ashkelon.

- To Akko and Nahariya, calling at Herzliya, Netanya, Hadera West, Binyamina, all the stations of Haifa, Hutzot-Ha-Mifratz, Kiryat-Motzkin, Akko, and Nahariya.

The rail service will undoubtedly contribute to ease accessibility to the show and release the expected traffic jams.

(p). SMS's.

The Editor sometimes rants that in the old days the Men had their S&M and their womenfolk went to M&S, whereas nowadays kids have M&M's and SMS's. IR has joined the throng: In a press release of 08.06.2009 it was announced that a new information service for timetables and tariffs has been introduced – by sending an SMS to No. 5770 one gets a response within seconds to a mobile phone; the service is available 24-hours a day via all cellular companies in Israel and costs $0.12 per question.

(q). SECURITY.

From a press release of 10.06.06 by Isra-Rail Co. Ltd.: The railways continue improving the protection and security of the passengers as an integral part of the aim of improving passenger services. The Israeli company Elbit Systems, which is the winning bidder of the railways' $10 Million tender for protection and security, will install electronic devices for protecting and securing railway stations and other sites all over the network. These include fences with advanced sensors, detectors, ultra modern cameras, etc. Over the almost 1000 km network, there are 47 passenger stations, and 338 passenger trains operate daily.

(r) DELAYS IN DEVELOPMENT.

'Yediot Aharonot' on 22.06.2009 published an interesting article by the Transportation Correspondent Benny Barak under the headline "The railway system is delayed"; A summary of this article: "Anybody who thought that the fast rail link A1 to Jerusalem will soon be completed is wrong; the same is true about the proposed rail link to Eilat on the Red Sea. The new budget of $7.25 Billion for the Railways presented last week to the Knesset may sound high, but it is not, when considering the fact that is being deployed until 2012.

The projects included in the budget are:

1. Completion of Tel-Aviv-Hahagana to Rishon-Le-Zion-West line (Moshe Dayan) - to be operational in 2011/2012 at a total cost of $525 Million.
2. Completion of double-tracking the suburban line between Tel-Aviv and Kfar-Sava - scheduled for June 2010 at a cost of $174 Million.
3. Completion of double-tracking and realigning the Tel-Aviv - Beer-Sheva (more accurately: Ramla – Na'an – Beer-Sheva, of which the section Ramla - Na'an is common with the old rebuilt line to Jerusalem) scheduled for March 2011 at a cost of $670 Million.
4. Completion of double-tracking the Kiryat-Motzkin - Nahariya section scheduled for September 2011 at a cost of $141.5 Million.
5. Building and completion of the Ashkelon - Beer-Sheva line by June 2012 at a cost of $297 Million; this line and the A1 to Jerusalem have delayed the start and completion of the $328M electrification programme to December 2015; the programme is to be re-checked.
6. Building and completion, scheduled for December 2012, of the missing vital link between Kfar-Sava and Shefayim (on the Tel-Aviv-Haifa mainline north of Hertzliya). (This $303 million program will create a direct, fast, and much more convenient link with Tel-Aviv and the south, as well as Haifa and northwards, for the people of Kfar-Sava and Ra'anana and surroundings rather than the present inadequate journey through Rosh-Ha-Ayin and Bnei-Brak, saving at least ten minutes; here all the obstacles have been recently removed, thus clearing the way for works to start. A.G.).
7. Completion of another missing vital link between Rishon-Le-Zion West (Moshe Dayan) and Pleshet junction scheduled for December 2012 at a cost of $246 Million. (This link will enable a fast, continuous, and convenient link between Ashkelon, Tel-Aviv, Haifa, and Nahariya, rather than the present inadequate journey through Lod; A.G.)
8. The A1 fast rail link to Jerusalem, scheduled – at present - for completion in March 2016 at a total cost of $1.719 Billion; this is now stuck at the Supreme Court due to appeals by the environmentalists.

Finally the correspondent mentions an additional budget of $1.012 Billion for

new rolling stock.

The article also mentions the Valley of Yizrael (Hedjaz) railway line revival, as dream, although about $37 Million have been allocated for design and promotion. (It seems that here Mr. Benny Barak is wrong; I've spoken myself with the railways, who confirmed that the government is particularly interested in building this line between Haifa, Afula, and Beit-Shean; A.G.).

Another line not to be built soon - is that between Akko and Carmiel in the Lower Galilee, budgeted at $27 Million for design and promotion, though originally scheduled for 2012".

So far, the article, but in fact here is little place for pessimism. The railways have started a new service initiated by the General Manager Mr. Yitzhak Harel (Haki) called "Meeting on train", during which the General Manager and his senior staff are meeting directly and in a non-formal way on trains and at different stations. During these meetings passengers are requested to ask any questions they want, complain, and raise any ideas they have regarding rail services.
The dates of these meetings as well as the ideas already raised are published in the railway website, and all that is needed from the passengers is to arrive at the place on time, without any preparation or registering.
The first "Meeting on train" took place on 15.06.09, during which Mr. Harel and his senior staff joined a journey between Haifa Hof-Ha-Carmel and Tel-Aviv Savidor (Central) stations, and talked with the passengers about their satisfaction with rail services, the passengers also raised ideas for service improvements, etc.

(s). MORE BARRIER PROBLEMS.

During 2008, 248 cases of breaking barriers arms at level crossings have been reported by car drivers violating the law by not stopping even with arms down; Channel 10 of the TV has shown that even a bus driver with passengers did so; all these cases are documented and the police tries to act as soon as possible against the violators; some sources suggest that Israel has reached a world record in the phenomena according to some parameters!

(t). HEART OF DARKNESS.

On 02.06.09 a technical failure occurred on a Tel-Aviv - Nahariyya train, leading to the collapse of the air-conditioning and lighting systems. The passengers had to endure the darkness and sweaty atmosphere until Haifa where they could change into a train where the systems were functioning. However, IR has said that it lacks any reserve train sets at present.

(u). DESIGN OF THE TIMES.

On 23.06.2009 the Committee for Principal Design Subjects adopted a report of the Sadan Committee and approved by 12 to 3 the original design of the tunnel and bridge section of the A1 Fast Link line to Jerusalem. (This is separate from Bridge 10 at the entrance to Jerusalem, which has been approved.) This meant they rejected the Appeal launched by the Green Party which had submitted a recommendation from a German expert whereby Nahal Yitla should have been tunnelled rather than bridged. The Committee's members declared that they are convinced that IR has made all necessary arrangements to minimize damage that might be caused to the area which has been defined as a National Park. The decision now moves to the National Council for Design and Building which is expected to give a decision within a month, but the chances of a change are small.

The Greens were, as expected, deeply disappointed and pledged to continue their efforts, whereas the railways of course expressed satisfaction.

(v). OVERSHOOTING.

Also on 23.06.209 a train from Modi'in to Nahariyya, formed of coaches from the 'old' fleet, stopped only 800m west of Modi'in Outskirts station rather than at the station itself - thus repeating an 'Overshoot' incident at the same place and with the same type of train.

IR confirmed that the driver who had performed the locomotive run-round had, on coupling, forgotten to connect the air brake pipes, this meaning that brakes were operable only on the loco itself. The driver has been disciplined and a public apology made. [But the implication is also that no brake test was made and that these coaches will just roll unbraked....]

(w). LEVEL CROSSING DAY.

On 25.06.2009 IR was to join European railways in the European Day of Awareness at Level Crossings. This day symbolises the common commitment of all branches of land transportation who have signed to the European Treaty for Road and Rail Safety; they have decided to act vigorously to increase public awareness of the need for care at level crossings. In Europe level crossing accidents are responsible for 33% of rail accidents and 2% of deaths; 95% of these cases are caused by road users.

24 countries were to participate in the event, including the UK, France, Italy, Germany, Switzerland and Austria. (Israel has a place of honour as the world leader in the number of grade separations under construction, albeit also as the leader in the number of barriers broken... relative to the network size.) Also, all non-grade-separated crossings are protected by barriers and other warning devices as well as being manned by watchmen.

(x). CURRENT GENERAL DATA ON ISRAEL RAILWAYS.

Route Length: ca. 975km., of which about 220 are double track. The new lines being constructed or planned, e.g. Tel Aviv - Rishon-le-Zion West - Pleshet Junction; and the A1 route to Jerusalem and doubling of parts of the line to Beer Sheva and Kiryat Motzkin - Nahariyya will add a further 90km. or so of double track. To ths will be added eventually the revival of the Hedjaz line, the line between Akko and Carmiel and that between Ashkelon and Beer-Sheva.

Rails: UIC 60, UIC 51 on main lines, UIC 50 and S49 (sidings.)
All main lines are of continuous welded rail. On the rebuilt section Beit Shemesh - Jerusalem UIC 60 rails are welded into 36m. lengths.
Sleepers: Concrete, B70 type locally produced by Ashbat. Timber used on turnouts.
Fastenings: Vossloh.
Steepest Gradient: 2.7%; Minimum Radius: 150m.
Employees: ca. 2,000, though this changes constantly due to network growth and increase in security staff.
Rolling Stock:
Locomotives:
10 GM-EMD G12 Bo-Bo used for freights and works trains.
48 Alstom - later Vossloh - diesel-electrics; 8 of these are SemiMega Co-Co for freights, 40 are Mega Bo-Bo for passenger traffic. At present 1 Co-Co and 2 Bo-Bo are stored unserviceable after accidents, their future is uncertain.
1 Kalmar T44-type Bo-Bo.
3 Alstom GA-900, one of which has not been operational for some years.
& G22, G26 and GT26 GM-EMD Co-Co's.
The three ex-ESR G16 Co-Cos are no longer in use.
IC3 3-car articulated diesel multiple units: 48. A further two sets have been destroyed in accidents.
Loco-hauled coaches:
Older type include:
1 O&K (1955) converted to power car.
4 Boris Kidric, converted to power car.
4 former Esslingen VT08-type d.m.u. intermediate trailer cars of 1955. Converted to loco-hauled.
8 built by Carel Fouché (France) 1961.
20 built Boris Kidric (Maribor, Yugoslavia) between 1964 and 1972.
8 stainless-steel coaches built Carel Fouché in the 1960's and bought second-hand from SNCF are parked at Qishon Works awaiting sale or scrap.
Newer Types:

37 Alstom-built (Spain), locally-assembled (Ha'argaz) push/pull coaches; 35 are in use including 4 power car/driving trailers. Two intermediate coaches were destroyed in a train/truck colllision.

150 Bombardier-built double-deck push/pull train coaches including power cars/driving trailers. 15 of these, including 2 power car/driving trailers, are non-operational following accidents.

87 Siemens-built push/pull coaches have been ordered; the first arrived 9 months later than promised; one 10-coach set has been in use for test running with passengers, but was reduced to 9 coaches due to insufficient loco power with the Bo-Bo's, then after three months it was returned to workshops with problems with doors and retractable steps.

The result is that the railways are

facing a severe shortage of operational rolling stock; a tender for 30 more double-deck 6-coach push/pull trains is nearing completion. There are options of up to a further 420 coaches - 70 trains to include power cars/driving trailers. If electrification work commences soon, then some of these will presumably be ordered as driving-trailers only. A tender for 30 new diesel-electric locos of 4000hp. and 160km/h capability for pulling 6-coach double-deck trains is also near completion.

The railways plan to upgrade and refurbish the IC3 Flexiliner dmu's as a mid-life operation; this will include replacement of engines and transmissions. The new type is yet to be decided. Another plan is to re-engine the Alstom GA-900 shunters with a Caterpillar or similar motor due to dissatisfaction with the current MTU 496 engines.

Freight Stock.
There are some 700 wagons; most are bogie flats for containers, the rest are specialised hoppers for ore, grain, ballast etc.
The railways operate track machines manufactured by Matisa, Plasser and Kershawe and have recently commenced rail-grinding using sub-contractors.

Signalling. Is centrally controlled from the newly-built Control Centre at Haifa Hof-Carmel station. The modern equipment is supplied by Thales.

85:05.

TENDERS.

(i). Tender No. TH/SR/10/08. Framework agreement for providing weed-killing and anti-mosquito treatment. The contract is for 24 months with optional extensions of up to an additional 24 months. Bids by 29-043.09.

(ii). Tender HN/KB/12/08: A framework agreement for double-tracking and upgrading on the Na'an - Beer-Sheva Section.
Works include: Dismantling of abandoned tracks including culverts and other infrastructures, earthworks, excavation/stone cutting and filling including drainage, roadbed works and supply of ballast, tamping of roadbed and ballast regulating of different thicknesses, removal of all sorts of construction waste, scrap etc.; concrete and reinforced concrete walls, supporting walls, drainage and culverts, extension of existing culverts, preparatory and dismantling works regarding disruptions to existing systems and adding protective measures to these systems.
- Structure No. 1: from km. 0+800 to km. 32+400.
- Structure No. 2: from km. 32+400 (Kiryat Gat area) to km. 53+000 (and in addition a section on the line from Kiryat Gat to Ashkelon.
- Structure No. 3: from km. 53+000 to km. 67+525.
- Structure No. 4: from km. 67+525 to km. 71+200; from km. 0+800 (Beer-Sheva University station) to km. 4+600 (Beer-Sheva Central station); from km. 73+300 (Beer-Sheva University station) to km. 74+019 south-east towards Dimona.
Implementation time: 24 months with an optional extension of up to additional 12 months. Latest bidding date: 20.04.2009.

(iii). Tender No. MC/KB/01/09 - Installing a new sewerage and drainage system at the Haifa Kishon works site, and replacing the existing system. Works include: Purchase and supply of pipes and pumps, assembly of underground pipelines, excavation and dismantling of asphalt and concrete ramps, treatment and installation of centrifugal pumps, electrical connection for punmps supply, etc. Implementation time: 8 months; Bids by 23.04.2009.

(iv). Tender No. HN/KB/01/09: Building a Pedestrian Subway and dismantling of Rokakh bridge on the Tel-Aviv - Kfar-Sava line.
Works include: earthworks, cast concrete works on site, inserting of lining piles, constructing of a pre-stressed Box element and transporting it to site by a pushing system, culverts, electricity works for lighting the subway, sealing, wall plating, frames, development and landscaping works, design and implementation of dismantling the bridge, dismantling and demolishing, reinforced concrete for building supporting walls, drainage and sewerage, traffic arrangements for access roads to works implementation.
The tender includes the following structures:
Structure No.1: An underground pedestrian passage at km 2+130 (from Tel-Aviv).
Structure No. 2: Drainage channels and culverts at the nearby Hayarkon Park.
Structure No:3: Design and implementation of dismantling and demolishing the existing Rokakh bridge.
Structure No.4 Supervision works.
Implementation time: 8 months. Latest bidding date: 04.05.2009.

(v). Tender No. HN/KB/01/09 for the framework agreement to carry out Communication works on the line Tel-Aviv-Hahagana - Rishon-Le-Zion West (Moshe Dayan) and Pleshet Junction. Works include: supply of cables and tubes of various sizes; exposing, opening, and closing of concrete channels, laying main cables - copper and optic, as well as telephone cables into the channels; building of a new communication infrastructure; supply of sub-assemblies and carrying out cables connections; installing and connecting of pedestals; delivery and installing of end boxes and corona blocks; and cables' relays checks.
The tender consists of the following structures:
Structure 01: Hahagana-Moshe Dayan section.
Structure 02: Moshe Dayan-Pleshet junction section.
The agreement is for 36 months with optional extensions of up to 12 additional months. Latest bidding date: 20.05.09.

(vi). Tender No. HN/KB/03/09: Designing and building bridge No.10 on the A1 fast link to Jerusalem.
Works include: Designing and building of the bridged section called bridge No.10, to be part of the Tel-Aviv-Jerusalem A1 fast rail link, as well as designing and building 2 supporting walls- wall No.5 supporting the nearby road No.1, and supporting wall No.8, which supports a planned service road.
The designed bridge No.10 itself consists of 11 spans of 45 to 125 metres; the bridge will be 975 m long with a maximum height of 80 m, located above Cedars' Valley at the western entrance to Jerusalem, and between the planned A3 twin-bored tunnels west of the bridge, and A4 twin-bored tunnels east of the bridge. Works include also obtaining building permissions from the proper authorities. Implementation times: 180 days for design + 36 months for building. Latest bidding date: 24.09.09.

(vii). Tender No. MS/RC/2009/4-: Permit for selling kosher hot drinks and light food on trains using carrier bags. The contract is for test running time of 6 months with optional extensions of up to additional 48 months. Latest bidding date: 21.07.09.

(vi). Tender No. HN/KB/06/09: Building a grade separation - a road bridge over the Tel Aviv - Kfar Sava line at the industrial zone of Petach Tiqva-Sgula to replace level crossing No. 183. To include: Preparatory works, dismantling and treating problems, earthworks, roadbeds, pavement and painting, drainage, culverts and drains, construction of the road bridge and supporting walls, lighting, etc. Implementation time 16 months, bids by 16.07.2009.

(vii). Tender No. MC/SR/01/09. For Overhaul and Repair Services of Gmeinder Reversing Axle Drives. For a period of three years, bids by 15.07.2009.

(viii). Tender No. MC/SR/02/09. For Overhaul and Repair Services of ZF Reversing Axle Drives. Also for three years, bids also by 15.07.2009.

85:06.

LIGHT RAPID TRANSIT.

A. TEL AVIV.

From 'International Railway Journal' May 2009 p. 18: 'Tel Aviv Debut for Siemens Avenio?'
"Siemens has unveiled its latest generation of low-floor LRV, which could make its debut in Israel. The Avenio is designed to be lighter than its Combino predecessor, and Siemens has employed a steel body, a new welding technique and reduced installed parts to save both weight and manufacturing costs. The LRV also features lateral stability elements to reduce lateral forces acting on the wheel and railhead as the Avenio passes through curves.

Siemens has a tentative order for 33 eight-section Avenios for Tel Aviv, although this is dependent on a financial agreement which has yet to be aproved by the Israeli Government."

From the Dutch 'Op de Rails' -

„Siemens may provide Tel Aviv with world record Avenio trams of 72 m long. This articulated 8-section design is based on the 4-s Almada for Lisboa and the 6-s Combino-plus for Budapest. Avenio is a steel framed follow-up for the aluminum Combino and is derived from a low-floor Bremen design."

B. JERUSALEM.

A lot has been written concerning the controversies; on 08.06.2009 the Jerusalem Transportation Master Plan spokesman Shmuel Elgrabli stated: „After the financial claim, there is Hope. CityPass is accelerating the paving works along the Red Line alignment along Jaffa Road. The team seemed satisfied this morning to see dozens of paving specialists in addition to other City Pass employees deployed along the streets between the Davidka Square and the Generali building near the Municipality, as well as between Nordau Square (near Binyanei Ha-Uma) and the old Sha'arei Tzedek Hospital (today the Broadcasting Authority offices) near to Machaneh Yehuda Market.

There is a serious attempt being made to reduce the inconvenience to the public caused by the slow advance with paving in granite along some 20,000 sq. m. along Jaffa Road. While the exact facts remain unclear, it seems that CityPass has finally understood that both the Government and the Municipality have lost patience and will not tolerate further delays which create transportation chaos in Jerusalem. The Team Inspectors added: „Unfortunately the way CityPass has been handling the work so far and the repeated delays have disgusted both the public and the professionals. We have clarified their rights to claim... but at the same time it is their ultimate commitment to do the work; there should be no connection between the various conflicting claims being fought, and the need to build the line to the highest quality and to a faster tempo. It is unacceptable that an international concessionaire should work at such a slow pace, as though he were an unimportant subcontractor; it is obvious that nowhere else in the world could Alstom (a member of CityPass) behave so, nor could it happen with any other construction project in Israel that Ashtrom - one of the largest local construction companies – could handle a construction site as it has, particularly in the capital city! With several hundred additional workers, improved planning and a tighter inspection, CityPass should be able to complete the project in the next year."

There is scope for optimism; so far works have completed over 70% of the 13.8km. Of the Red Line; at the depot – control and operations centre – works are approaching completion, and work has also started on the electrical power systems that will provide the current to the LRV vehicles.

Veolia/Connex has sold its 5% share of CityPass.

85:07.

NOTES AND COMMENTS.

(a). RICHARD HARTMANN.

2009 is the centenary of the birth of this famous engineer and the Editor recently had the opportunity to visit an exhibition in Chemnitz, in Saxony, where the Works were formerly situated. The works itself has almost wholly disappeared, only one of the administration buildings surviving and serving now as the Police headquarters; there is also a Hartmann Strasse.

Hartmann built for the Hedjaz system the series of 2-6-0's HR Nos. 34-36, 48-51 (later HR Nos. 50-56) (Works 3036-3038/1906, 3093-3096/1907); 2-8-0's 37-43 , 56-65, 82-86 (later HR Nos. 90-111, (Works. 3039-3045/1907 3457-3466/1010; 3542-3546/1911); 2-8-2 tender locomotives Nos. 254-265 (Works 4023-4034/1918). Also DHP 0-4-4-2T's Nos. C61 & C62 (later CFS 02021-961 & 962) (Works 3000/1 in 1906.)

Reichard Hartmann was born 8th. November 1809 in Barr in Alsace, third of five children. After training at a Blacksmith's he went in 1830 on his 'Wandering Years' through France and Germany, and in 1832 came to Chemnitz, which was at the time a major manufacturing and trade centre in the Kingdom of Saxony. He arrived with 2 Talers in his pocket, from selling his watch, and found work in the factory of Gottlieb Haubold, (1783-1856), considered the 'Father of Machinery manufacture in Chemnitz'. Here he had to learn the art of constructing machines for textile production, cotton spinning and weaving etc., rose to supervisory positions, and on 13th. March 1837 together with another Foreman, Franz Carl Illing, founded a firm and acquired first premises, initially repairing and then constructing textile machinery. As an Alsatian it actually took him until June 1837 to acquire Saxon citizenship. Around 1840 he formed a new partnership with August Götze, who brought some badly-needed capital into the enterprise, and moved into expanded premises. But in 1842 this partnership was dissolved and Maschinenfabrik Richard Hartmann was founded. In August 1845 a fire nearly led to the destruction of all construction drawings and the account books in the office, but due to help and some brave climbing of ladders all was saved. The Revolutions of 1848 nearly drove him to bankruptcy, but then came State orders - for weapons! The manufacturing premises were enlarged further. By 1864 they already comprised 39 buildings and the main machinery erection hall was just commenced, the firm occupied 68,950 sq. m. Another big fire in 1860 had destroyed some of the production machinery - especially for locomotive construction - but the damage was repaired and the equipment replaced.

Products included not just weaving and spinning machines but steam boilers and engines, and in 1843 he began plans for locomotive construction - initial bids were turned down, he went to England on a study tour and engaged a Constructor in Alsace - Heinrich Theodor Steinmetz, and a good boilersmith from Aachen.The first locomotive was ready in January 1848. At this time there was no railway in Chemnitz and the engine, for the Sächsisch-Bayrische Staatseisenbahn, had to be taken in parts to Leipzig and erected there, being formally delivered on 5th. February. This 2-4-0 was named 'Glueckauf'; it cost 12.900 Taler and a further 6 similar engines followed the same year. Soon his reputation led to orders from the Saxon State Railways. The 100th. engine left the works 18th. April 1858 - in this year locomotives provided 78% of the turnover which had reached 1 Million Taler for the first time. By 1861 113 Hartmann locos were at work in Saxony; Between 1852 and 1871 39.7% of locos went to railways outside Saxony - in 1868/9 for example 43 to Russia. The 200th. loco was built in 1864, by 1869 more than 50 were being built per annum, by 1874 100 per year. Hartmann died in 1878 - on 3rd. June that year the 1,000th. loco was completed. Ironically due to arguments with neighbours (especially a former employee who had now established a competing business on the necessary land!) it proved impossible to build a connecting siding to the works in the Leipziger Strasse and until 1908 all locomotives (and all supplies of coal, steel etc.) had to be transported by road to the nearest rail connection! Only then was it possible to fit a connection along the streets, worked by an electric loco.

His first wife Bertha died in March 1869; in 1872 he remarried - to his housekeeper, but suffered a stroke on 14th. December 1878 and died four days later.
From the first marriage there were 8 children (one of whom died in infancy) plus one illegitimate daughter. The first son had hearing problems, the second, Gustav (1842-1910) however was involved in the business and in 1896 founded a Russian 'branch' of the business in Lugansk, Ukraine - still a famous works for diesel locomotives. 600 locomotives and tenders had been delivered from here by October 1904.

In the meantime the firm underwent various structural changes, into a Limited Company, and from 1899 was known as 'Saechsische Maschinenfabrik, vorm. Rich. Hartmann AG, Chemnitz.' There was steady growth (the booklet mentions 2-6-0's for the Hedjaz Railway being built 1904, but see the works numbers above); in the First World War not only locomotives (including those for the HR) but also a wide variety of munitions and transport wagons were produced; on 9th. March 1918 the 4,000th. loco was delivered - to the Koenigliche-Saechsischen Staatseisenbahnen, a 4-cylinder superheated compound 2-8-2. However, despite the Reparations demand in the Versailles Treaty of 1919 whereby Germany had to deliver to the victorious Powers 5,000 locomotives and 7,000 tenders, and delivery of 147 locos in 1919

(mainly to Saxony), the lack of orders from the newly-formed Deutsche Reichsbahn soon led to a hopeless situation for the locomotive constructors. Export markets had also shrunk. In 1929 construction rights were sold instead to the Berliner Maschinenbau AG (vorm. L. Schwartzkopff) for 1.1 M. Marks - though there are different figures in circulation the booklet settles on a total of 4,611 locos built 1848-1929.

In April 1930 the firm went into liquidation, but a part was saved as 'Saechsische Textilmaschinenfabrik, vorm. Richard Hartmann AG'. During the Second World War it produced, amongst other things, grenade launchers and also made machines for many other firms throughout Germany, and both Prisoners of War and Forced Labourers (Zwangsarbeiter) were 'employed'. In Summer 1945 the Order No. 123 and 124 of the Soviet Occupation Command required the dismantling of much machinery; In 1946 some production recommenced - by now nationalised as 'Volkseigenebetrieb (VEB) Spinnereimaschinenbau'; the end of the DDR brought with it new problems and on 28th. November 2008 the firm was finally liquidated.

(b). ARBEL.

Israel Railways possesses many modern bogie freight wagons - quite a few of which have been constructed by Arbel. A sad note in 'Today's Railways' No. 160 p. 48:

"On 28 January the last major wagon builder in France, Arbel Fauvet Rail of Douai, went into receivership after a fall in orders. We reported only a year ago that AFR had been revived after a previous bankruptcy thanks to the upturn on freight traffic and, in particular, large orders for bogie stone hoppers from Euro Cargo Rail and Colas Rail."

(c). RESTORED JAFFA STATION.

On 07.05.2009 Sybil Ehrlich wrote: "Today I went to have a look round Jaffa station. I had no idea what to expect. From the outside, I could see rows of chairs and people setting up loudspeakers, obviously for some kind of event. I asked the security guard (not the creepy one who was there on my previous visits) whether I could go in and have a look round, and he had no objection.

Well, first of all, neither of the refurbished coaches is protected in any way. If I was so minded, I could have sprayed graffiti all over them, or even burnt them to the ground. Who knows what kind of people will be attending tonight's concert??!!

The main station building has not been touched inside. I went in and had a good look round. There was nobody to tell me not to! I also climbed up the rickety wooden staircase and went out onto the roof-level balcony. The best part is the "Salles d'attente [?] classe" inscription on an inside wall (for those who don't know French, it's "Waiting rooms [?] class", presumably first class but that part is illegible).

The other building, once a warehouse I assume, houses an art gallery. It was open and I went in. The current exhibition is of paintings of scenes of Tel Aviv, painted in the last few years but all based on photos from the 1940s and 1950s. One of them is the famous train going along Yehuda Halevi Street, but from a different angle (or maybe just flipped)."

(d). ANOTHER LOSS.

We are sad to report the death of Richard Bowen, a long-standing subscriber and railway historian.

85:08.

OTHER MIDDLE EAST RAILWAYS.

A. TURKEY.

FROM ISTANBUL TO ADANA.

From 'Eisenbahn Kurier' 3/2009 March, pp. 72-76, by 'GG', a photographic essay on a trip through Turkey in October 1972. From the text:

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"There is no railway line about which so much has been written as the Bagdadahn. Its history combines all the political power plays of the Great Powers of Europe at the turn of the 20th. Century. Through Germany's step-by-step approach to the Ottoman Empire England and France perceived their own spheres of influence threatened and yet at the same time considered construction of this line to involve high financial risks. But the expanding German Empire continued its efforts and during a trip to the Orient in October 1898 Kaiser Wilhelm II signed an agreement with Sultan Abdul-Hamid II for the extension of the Anatolian Railway Istanbul (Constantinople) - Konya which should traverse the Taurus Mountains to Adana, Aleppo and Mosul to Baghdad and eventually to the Persian Gulf.

Once the final Concession document had been issued in Spring 1903 on 27th. July the construction of the line could begin - naturally with much German involvement. The firm of Philip Holzmann built the line and many stations, Krupp delivered the rails, Borsig, Hanomag, Henschel, Maffei and Cail (Paris) supplied the locomotives. Despite an interruption in the construction work from 1904 to 1910 due to political unrest, by 1913 the first 600 (of the planned 1,600) kilometres could be opened for operation. The Taurus Mountains provided the engineers, especially Heinrich August Meissner from Leipzig, with significant challenges. The 'Cilician Gates' had to be traversed not alongside the ancient road but, due to the very difficult topographical conditions, required 37 tunnels with a combined length of 20km. and a near-endless number of bridges. By 1914 1,094km. had been completed, by 1918 2,000km. The altered political situation following the First World War meant now that the Bagdadbahn was not in fact completed until 1940 - in a world which had changed radically yet again....

For the journey through Turkey - with a hired Volkswagen 'Beetle' of 1964 - we had envisaged driving where and when we wanted depending on our mood and not try to apply ourselves to a fixed timetable. We wanted especially to see the unique section of line through the mighty, over-3,000m high Taurus mountains with the 'Cyrillian Gate' between Ulukisla and the ancient city of Tarsus on the fertile coastal plain, and Adana. Many of the station buildings, rails, vehicles and signals along the Bagdadbahn line still remind one today of their constructors and most remain in their original form.

It was good that we were already in October, for the long drive through the Konya Plain with its average height of 1,016m proved significantly cooler than in the hot summer months. We had also made the right choice with our 'Beetle', for its robustness and reliability on the roads, many of them unsurfaced, was far more important than comfort. But even a VW needs petrol! When the supply got rather low between Konya and Ulukisla, because we had bypassed a petrol station while chasing a train, and the reserve canister had also been used, we were fortunately helped by a Turk passing by who had petrol. He refused to take any money for this, his pride would not allow it. But he was amazed to meet in this isolated place Germans who had come so far merely to photograph the railways.

To be honest, there was one especial locomotive type that had attracted us to this region: the TCDD (Türkiye Cumhuriyet Devlet Demiryollari) operated its locomotives 56.701-748 between Adana, Ulukisla and Konya - these are the German Baureihe 44 2-10-0. These had however come not from Germany but from France, where it was possible to manage without them following the electrification of the line Valenciennes- Thionville in the mid-1950's. They never actually carried German numbers (though of course a series had been reserved for them) since they had all been built in French locomotive works and after the war in 1945 were absorbed into the SNCF as their class 150X. In 1955 the TCDD acquired 48 of these locomotives, which were transported to Turkey by land under their own power, stationed them all in the Adana depot and used them from there over the most difficult sections of the Bagdadbahn (Yenice - Ulukisla - Konya) and to

Fevzipasa (east of Adana), on both passenger and freight trains. In service over the Taurus the locomotives had to be manned with two firemen, and these men will have seen very little of the beautful landscape. From Ulukisla the Bagdadbahn reached after about 54 kilometres the little station of Belemedik. After taking water, the section through the 'Cilician Gate' - the Great Canyon with walls up to 1000m high - a section difficult for both engines and crews - begins. Even for this short section 17 short tunnels with a total length of 8.400m and several viaducts were necessary. In total, as already mentioned, 37 tunnels were needed between Uluksla and Adana, and the line manages to rise by almost 1,400m. in its 132km. and with gradients at up to 25%. One has to travel this way in order to see for oneself what amazing achievements were accomplished by the enginners and workers here.

Whereas it is cool - especially in the evening - on the north side of the Taurus mountains in October, on the southern side is the mild Mediterranean climate, and one can pack pullover and jacket away again. Only women are working in the enormous cotton fields around Yenice and Tarsus. In Yenice the Bagdadbahn makes a wide curve into the station and here meets the line (Adana) - Yenice - Mersin. Both exits have original German three-armed semaphore signals, a type which has not been seen in Germany for many years.

We are happy to be in Adana, a railway junction, a university town, and centre of the Turkish textile industry - our destination. On visiting the depot we are immediately reminded of the depots at Ehrang, Ottbergen or Sangerhausen - an impression which is not affected by the slight visual differences between the Turkish locos (with their cowcatchers and spark arrestors) and their German sisters. Like most of the 44-ÜK type, the Turkish locos 56.701-748 work without smoke deflectors, have the ÜK-type cab and the pumps at the front end, and they remained in this form from delivery until withdrawal.

The railwaymen however did not share our enthusiasm for these machines. They longed for the dieselisation of the Taurus line, which in fact could be carried out in 1975/6. It was good that we could get there in time to see the steam spectacle....."

B. IRAQ.

(a). EXPORT LOCOS.

From the 'Turk-Rail' Chatsite:- „Sunday, March 8, 2009 Export Locos Yesterday I followed a freight hauled by 33073 between Karaman and Ulukisla that included 5 new locos that looked like TCDD DE11XXX type lettered IRR and bearing arabic numbers.I assume these are for Iraq...".

(b). OLD NEWS (1978).

In 'Der Modelleisenbahner', a rather sad magazine from the DDR period filled with self-criticism and Socialist fervour, is a section 'Wissen Sie schon...?" - "Did you Know?" which tends to have snippets praising railway developments in Socialist countries whilst highlighting financial problems for the railways in capitalist ones! In the 8/1978 edition p. 246 is the following note:-

"In Iraq work will soon start on a new railway line of 242 kilometres - this will run from Al-Mussayib, some 120km. south of Baghdad, to Samawa. At present plans are being prepared for a railway link 555km. long between Baghdad and Al-Qain, which will connect the phosphate mines in Akashat with the network of this Arab country."

C. SAUDI ARABIA.

In 'C.R.J.' 157 Spring 2009, p.511f.:

"Hedjaz Railway, Meda'in Salih. A visitor to this former station in November 2008 found that restoration work had been undertaken on the station buildings and engine shed. Whilst track outside the engine shed had been lifted, rails and sleepers had been put neatly to one side, and piles of ballast suggested that a short section of track was going to be relaid. Various freight wagons had been smartened up, and whilst 2-6-0 60 (Jung 964/1906) had not been fully restored, it appeared to be well cared for inside the shed. Thus there appears to have been some further progress...."

Accompanying photos by Peter Heseldine show the two-road engine shed inside and outside, some wagon frames (all timberwork removed), the 2-6-0 separate from any tender, and at Al Ula (some 225km. south of Meda'in Salih) a bogie van and another stripped to the metalwork.

D. ERITREA.

(a). 2008 TOUR

From 'C.R.J.' No. 157 p. 500: "In 2008 the annual RTC visit to Eritrea took place from 29th. October to 4th. November, and everything that had been requested was available. Compared with the 2007 tour the 1915-built Mallet 440.008 was now able to work a train for the party. However, on the trip from Asmara to Massawa on 30th. October, this loco was seen dead in a siding at Nefasit, not a hopeful sign as it had apparently failed on a train some days earlier. Railway staff gave an assurance that it would be working the next week, and when the party travelled from Ghinda to Asmara with Mallets 442.54/59 on 2nd November, 440.008 was seen raising steam at Nefasit, to go with one coach ECS back to Asmara. On 4th. November , 440.008 went back down to Nefasit in advance of the party, who travelled in the Fiat 'Littorina' railcar. Later the party travelled back uphill to Asmara with 440.008 and its one coach, with only a few stops for 'blow-ups'. This was the conclusion to another excellent visit to a fascinating and spectacular railway.'

(b). ERITREAN MOTIVE POWER LISTS.

In the same issue of the 'C.R.J.' pp. 480-483 is an extensive and comprehensive list, by R.N. Pritchard, of all locomotives and railcars and 'rail lorries' that have ever worked in Eritrea - we will not reproduce the list in full here and just note the following:- It includes the initial Henschel 0-4-0T's of 750mm gauge of 1887, rebuilt to 950mm gauge around 1900; the many Maffei, Breda, OM and Ansaldo 0-4-4-0T and 0-8-0T's built to 950mm gauge from 1907 to 1933, the Fiat diesel railcars, the stock of the 60cm Mersa Fatma - Colulli Railway which closed in 1929 (!), the 60cm. gauge Massawa Salt Works internal line, etc. , explains which locos went or came during the war, mainly from Italian Somaliland but also Libya; explains that the 'R' prefix means simply 'Scartamento Ridotto' - reduced gauge - i.e. narrow gauge; and the extensive notes cover various variant possibilities. A very professional piece of work.

E. IRAN.

MAGLEV PLANS. Translated from NVBS magazine OdR-2009-7: „The closure of the Lathen Transrapid test track may be suspended a while. A German engineering company claims to have a contract with Iran for a 860 km long high speed maglev between Teheran and Maschad. The Transrapid company was not yet informed about this initiative and it may be declared undesirable to share this technology by German politicians." (note: similar technique could be used for electronic missile launching...)

F. ROMANIAN LOCOS FOR MIDDLE EAST?

In 'Today's Railways Europe' 158 (February 2009) p.57:-

"Electroputere to build Diesels?

Traditionally this factory in Craiova is better-known for its electric locos, but could soon turn to the manufacture of more diesels. It is now owned by the Al Arrab Contracting Company and has identified the possibility of exporting diesels to Middle Eastern countries without electrified lines. The engines for these will almost certainly be from US company EMD."

85:09:

SABOTAGE IN 1936 AND 1939.

This article has been on file for some time and came originally from Paul Cotterell. In view of current debate about the armouring of military patrol vehicles in Iraq and Afghanistan, the comments on armouring of trolleys are apposite.

From a file simply marked "Secret" in the IRM Archives comes the following account, in a letter to the Chief Secretary dated 5th. Sept. 1936:

Subject: Derailment at Kilometre 80.500 (Qalqilya-Ras El Ein section), 4th. Sept. 1936.
Confirming my telephone message with an Assistant Secretary yesterday, I regret to have to report so shortly after the derailment at this place on 28th. August, a further accident in the Qalqilya - Ras El Ein section of the line involving, on this occasion, casualties to Railway, Naval and Military personnel as well as extensive damage to two locomotives and the permanent way.

The details are as follows:-

On the 4th. Sept. two light engines Nos. 888 and 878 of the 'H' Class (Baldwin tender) coupled together were sent 'light' from Lydda to Haifa in connection with the balance of locomotive power.

The engines left Ras El Ein (Kilometre 91.282) at 12.55 hours and were derailed at about 13.15 hours at Kilometre 80.500 which is about 1 1/4 kilometres from Qalqilya village and near to the cross roads east of the village.... Both engines turned over on their sides and it transpires that rail fittings had been removed from the track at this point by saboteurs who had evidently hoped to wreck the passenger train. Fortunately this was foiled by the passage of the two light engines which is not a daily occurrence.

The following casualties occurred:

Engine No. 888.

Driver Mohammed Abdulla (Palestinian). Killed.

Fireman Hassan El Abbad. (Palestinian). Scalded and removed to Nablus Govt. Hospital. Expected to leave in a few days.

Drummer Quirk, 2nd. Cheshires.Killed.

Drummer T. Oates. ditto. Severe scalds. (since died.)

Engine No. 878.

P/K 28538 Stoker P.O. H. Shorter.(Both suffering from multiple scalds.)

R/X. 78316 Stoker. W. Brown.

Palestine Railway Instructional Driver. S. Monk. Suffering from shock and injury to right leg.

I deeply regret the deaths of the British soldiers and the Palestinian Engine Driver.

Service personnel were removed to Sarafand Military Hospital and the body of Driver Mohammed Abdulla was despatched to Gaza for burial. He was a married man 40 years of age and 17 years service. He leaves a widow and five children.

The accident was first reported at 13.35 hours by one of the naval ratings who walked into Qalqilya station and shortly afterwards an aeroplane dropped a message at that station confirming the incident. A military ambulance and troops were despatched from Tulkarm immediately.

Passenger train No. 7 which left Haifa at 11.15 hours was terminated at Qalqilya and seven buses, with police escorts, were sent from Ras El Ein to take the passengers to Tel Aviv.

The permanent way was destroyed for a length of 50 metres necessitating complete reconstruction.

Engine No. 888 which has just been equipped with a new boiler was only on its second run after coming out of shops. Breakdown trains with 25-ton steam crane were sent out from Lydda and Haifa with the least possible delay.

The following alterations to the train schedule became immediately necessary:-

11.15 hours passenger train Haifa - Lydda ran to Qalqilya only.

14.30 hours passenger train Lydda-Haifa ran from Hadera only.

14.00 hours passenger train Haifa - Lydda was suppressed.

Three goods trains were held at wayside stations overnight. One goods train which was despatched from Haifa was returned.

Meanwhile, the two engines were thrown clear of the track and by working the breakdown crews and permanent way gangs throughout the day and night, the line was re-opened for traffic at 02.20 hours to-day. Although protected by troops the breakdown gangs were fired upon from short range during the night and again on their way back to Lydda.

Having regard to the volume of goods traffic en route to Lydda and waiting to be moved at Haifa and Lydda, it was decided to suppress all passenger trains between Haifa and Lydda to-day excepting the through pasenger services Haifa - Kantara and vice versa.

In view of the several incidents on this section of the line there were already speed restrictions of 50 km/h between Tulkarm and Lydda and of 15 km/h between Kilometres 84/85. A platelayer who had been detailed specially to patrol the vicinity was actually walking AWAY from the scene - about 1.5 km. distant - when the accident occurred and a goods train from Haifa had only passed this particular place some 35 to 40 minutes before. The rapidity with which the rail fittings were removed manifests the number, equipment and experience of the saboteurs.

In addition to the derailment under reference, others have occurred - three of them on a Friday - in the Ras El Ein - Qalqilya section during the last six weeks, as follows:-

24th. July. Goods Train No. 87. Engine & 11 wagons derailed.

6th. August. Goods Train No. 85. Engine & 21 wagons derailed. Serious damage caused to the engine and total loss of 10 wagons.

28th. August. Pilot Motor Trolley and passenger train No. 8. Trolley Ford V.8 (No. 1 Armoured Unit) derailed and destroyed. Engine, three bogie vans and one passenger coach derailed.

As reported in my letter GM/4640 of 3rd. Sept. an extra gang of platelayers was sent to Kilometre 85 on the 2nd. Sept. together with a guard of 4 Supernumerary Constables appointed in conjunction with the police authorities. These supernumeraries refused to remain at the place and the Chief Engineer is endeavouring to replace them. It is submitted that work of this nature should appropriately be undertaken by armed forces and that the employment of railway personnel for the purpose is to the detriment of permanent way maintenance.

Additional precautions have now been taken between Qaqun and Ras El Ein as follows:-

(a). A temporary speed restriction of 25 km./h for all goods trains.

(b). Watchmen have been stationed at intervals of one to two kilometres between Haifa and Ras El Ein though it is feared their reliability is impaired by intimidation.

Further, the Officer Commanding, Lines of Communication, has taken steps to provide military guards in the vicinity of kilometres 80 to 85 but it is not known whether these will be permanent.

The frequency of these accidents on a comparatively short section of the line threatens seriously to undermine the morale of the engine crews and certainly imposes a heavy burden of additional work on the Transportation and Engineering Branches who have done their utmost to maintain normal train services. Moreover, the reparation of locomotives and rolling stock as the result of sabotage has very considerably increased the already heavy programme of work at the Qishon Workshops.

A further regrettable aspect of this latest derailment is its serious repercussion on all phases of traffic operation. The Department

has been working to the maximum capacity to deal with the recent heavy influx of freight at Haifa port all of which has to be transported during hours of daylight. The accumulation of goods traffic at Lydda has now increased and the problem of starting to dispose of it today (Saturday) was aggravated by the difficulty of getting wagons offloaded at Tel Aviv. This, in turn, will act adversely on the wagon situation at Haifa at the beginning of next week.

The President of the Chamber of Commerce at Tel Aviv has promised to induce merchants to offload as many wagons as possible.

In view of the continued and frequent attacks on the Railway it is urged that more effective police and military measures should be taken to prevent sabotage. Essential maintenance work is impossible in the existing conditions where permanent way personnel are perforce employed to patrol the line and repair the incessant damage. Otherwise a further modification of the advertised train services will be unavoidable.

To facilitate salvage of the derailed locomotives tomorrow all passenger train services on the main line will again be suppressed with the exception of the through services Haifa - Kantara and vice versa and the Sentinel Cammell Steam Car Haifa - Hadera and return.
(Sgd. G. M. Campigli. Acting General Manager.)

Note that the unfortunate engine driver had been employed by PR since its inception in 1919/20. It is unclear why two unlucky Drummers were on the footplate.

A previous report (Secret GM4640 of 29/8/36) on the derailment of 28th. Aug. gives more details - this time there were fortunately no fatalities.

"The passenger train from Lydda to Haifa (No. 8) left Ras El Ein at 11.43 hours yesterday and was preceded by a pilot motor trolley - the first of the Ford V8's - owing to the exceptional measures which the Railway has been compelled to adopt since the 8th. August to ensure the greater safety of passenger trains against acts of sabotage. At km. 85 where the line is on a curve a rail had been moved and re-spiked wide to gauge and the trolley was derailed. The occupants of the trolley were uninjured and immediately took steps to protect the oncoming passenger train but, unfortunately, the Driver of the latter was unable to pull up in time although he had made a full application of the brakes. The train driven by Khalil Nassar - one of our most experienced Drivers - and accompanied by a Naval crew on the footplate collided with the trolley and pushed it approximately 35/40 metres along the track when it then caught fire and was completely destroyed.

The engine together with three bogie perishable & refrigerator vans, and one composite coach derailed, due to the same cause as the trolley, but all remained standing up thereby lessening the extent of the damage and facilitating their re-railment.

As the train was reported by the Trains Office to be overdue at Qalqilya the assistance of an aeroplane from Er Ramle was sought and Police and Military were despatched from Ras El Ein respectively. The Police were first to the accident and a road ambulance from Lydda was immediately rushed to the scene. At the same time arrangements were made for the Railway ambulance coach to be sent out from Lydda. Breakdown trains equipped with 25 ton steam cranes were despatched from Lydda and Haifa and worked continuously to clear the line.

The main line was blocked from 11.50 hours yesterday until 09.00 hours this morning and the following trains were affected in consequence:-

12.00 Passenger Train Haifa to Lydda ran to Hadera only.

15.20 Passenger Train Lydda to Haifa ran from Hadera only.

14.45 Passenger Train Haifa to Lydda was suppressed.

Four Goods Trains were held at wayside stations overnight.

Three Goods trains were held up at Lydda pending repair of the track.

Train No. 2 from Kantara to Haifa was delayed 80 minutes.

This was a serious delay which will have its reprecussions on the turn round of wagon stock for the next two days.

There have been other attempts at sabotage in the vicinity of Kilometre 85 during the last few weeks....." [the letter lists the Goods trains mentioned in the later report.]

I understand that as an outcome of these derailment, which as well as being very costly have resulted in serious disorganisation of the train services and rendered train operation extremely difficult, a military post is being established at Kilo. 85. When this has been done an additional platelayers gang will be stationed at this place."

On 3rd. Sept. an additional Secret letter noted:
".... the Chief Engineer now reports that he has since learned that it is not intended to place a permanent Military post at Kilometre 85 but a platelayer post of ten men supported by four Supernumerary Constables has been established at that place."

Noticeable is that each incident is described as an "accident" rather than an act of wilful sabotage. The Naval personnel were presumably armed, although trained as stokers in ships. (P/O probably Petty Officer, it can hardly be Pilot Officer! Yet the second engine had two Stokers and an Instructor in the cab.) One wonders at what speed the passenger train was travelling when it could not stop precisely when its escort trolley had indicated the need to do so. It is also remarkable that in both cases an aeroplane was used to scout for the missing train. No other means of reliable communication appeared available!

As we know, the sabotage and the Uprising continued unabated. A particularly unpleasant incident on 20th. Jan. 1939. led to further casualties and a Lieut. R.E. (no name on the copy preserved).O.C. Detachment 8th. (Rly) Co. R.E. wrote an angry letter on "Armouring of Trolley Floors."

"The land mine explosion at Kilo 27 Jaffa-Jerusalem line this morning has brought to light very serious weakness in the design and construction of the "splinter-proof" floors in the armoured rail trolleys. As you know the whole floor of one trolley was blown out, resulting in heavy casualties to British personnel. I therefore have the following recommendations to make, as regards modification of design:

The steep plate used must have an effective thickness of 1/2 in. The plates on the damaged trolley are scarcely 1/16th.in. thick, and are absolutely useless as protection.

To compensate for the extra weight involved by this additional armour the side plating can be lowered at least one foot each side, the cut away to start just behind the driver's seat.

The bottom armouring should be continuous right across the truck. The present system of a number of separate plates is dangerous, as individual plates get forced up by the explosion, and merely add to the number of missiles which can damage the crew. In any case the plating must be securely rivetted or bolted to the frame members, and not merely screwed (with wood screws) into the floor planking, as is done at present.

I cannot emphasize too strongly the necessity for immediate action in this matter. As an additional argument I might add that now that it is realized how little protection the thin floor gives, I have been instructed by Commander, 19th. Infantry Brigade, that the floors will be sand bagged until adequate bottom armouring is provided."

C.R. Webb, the General Manager, responded in rather hurt and defensive tones on 27th. Jan. 1939 (ref. 46/4/66):-

"I think the O.C. the Detachment of Royal Engineers at Lydda can only have measured the 14" wide rear platform plank upon which the fall plate slides since except for this narrow piece in the rear of the trolley the floor is protected by sections of 1 1/4 in. timber with a 1/8th.in. mild steel plate on each side.

You will remember that we were asked by the combined Railway Board to provide splinter-proof floors and in this connection I refer to your letter to me MC/P.258 of 11/4/1938 in regard to the three armoured trolleys for the Hijaz Railway and in which you quoted the following opinion of the C.R.E. on the subject of splinter-proof floors for these trolleys:-

"The protection of the floor need not consider the question of high velocity bullets. For bombs or fragments of broken rail a 2 in. timber plank should suffice so long as they are sufficiently securely attached to the chassis. Should the existing floor be of less strength than this it is suggested that a very light steel plate fixed beneath the existing

floor would serve to distribute the shock over a larger area."

You will see, therefore, that for the new standard gauge trolleys. one of which was involved in this accident, the C.M.E. designed a floor which, in itself, was stronger that that proposed by the C.R.E

So far as I remember the first trolleys used in the disturbances were entirely without protection against bullet or bomb and, with the exception of the existing light units, the trolleys have been improved up to their present design as the result of experience gained and in accordance with the wishes of the Military Authorities.

We shall, of course, be very ready to improve them further as far as possible in order to avoid such unfortunate results as those which occurred in the explosion near Ramle on the 20th. inst. and I understand the question is under consideration. In the meantime I should not like it to be thought that we had taken such inadequate action on the request for splinter-proof floors as the letter from the O.C..... implies and it would be a matter for satisfaction if the impression created by that letter might be corrected at any rate as regards the thickness and strength of the floor, with the exception of the narrow rear platform to which I have referred."

Nevertheless, there were other attempts made to safeguard the line, and at least one intriguing experiment can also be extracted from papers in this file. Minds were working, and one idea was to mark the track somehow so as to make it easy to tell if the track or ballast had been disturbed in any way. This was not going to be easy. The surviving correspondence is incomplete but the following stages can be noted:

On 22nd. March 1939 the Chief Engineer instructed the Stockman at Haifa to transfer to the Works Foreman certain materials (wheels and axle bearings) for construction of a special trolley to convey a tank for a special liquid spray. This was "to replace trolley No. 10, against emergency expenditure" - what happened to trolley 10 is not clear.

A handwritten letter (signature illegible) dated Lydda and addressed to Scrivener 24.2.39 (i.e. before this order) notes:-

"I do not think that colour wash lines will justify the cost and bother involved. There are at present pretty useful oily bands just inside the base of each rail. If these do not help, extra bands are not likely to either. On stone ballast the lines will not be continuous, being broken by the unevenness of the surface. Therefore saboteurs can easily take up the marked ballast and replace it so as still to give the appearance of an unbroken line. Again, almost any colour can be easily copied. Light and shade, damp oil etc. will always give variations in colour on the line. In some areas, cattle and sheep and people walking will always break up the lines. Platelayers are always working somewhere in each section ..... [Saboteurs will] at once spot special [measures]; they will either move the stone carefully, repaint lines or go always to a place where the platelayers have just worked. The last will mean more accusations against the platelayers. It is not possible to specify to all patrols where platelayers are working.

The way to stop mines is to get the C.I.D. and dogs in each case early and to catch the people responsible. At present there is too much delay before anything is done."

Despite this sensible advice from someone 'on the ground', the powers-that-be had decided that something had to be seen to be done. A "Secret" report from the District Engineer, dated 7th. April 1939 from Lydda to the Chief Engineer, Haifa, L/145/3 described "Test of a seal coat of colour wash on ballast.

"A length of 2,200 kms. of track immediately north of Lydda was tested. The first length treated was 1700 metres. 200 lbs. of deep purple colour was mixed with whitewash to make 400 gallons of colour wash. The application took two days and cost £P.5. Only one trip per day could be made as it was difficult to obtain the staff for occupation of this section.

The second length treated was 500 metres. This took one trip and one day, 200 lbs. of green distemper being used to make 10 gallons of colour wash. Whitewash could not be used to economise the distemper as the colour was not a strong one. The cost was £P 4.700. The result of the test and conclusions reached were:-

1. The work was too expensive for general use.
2. The material trolley and tank were unsuitable Nothing short of a large tank properly fitted out with pressure sprays working in four directions and drawn by train would be of use.
3. The purple colour bleached out after three weeks so that frequent applications would be necessary.
4. It is easy to pick out the coloured stones, dig, and replace them leaving the colour lines complete.
5. Plain whitewash is useless as anyone can replace it.
6. It is not possible for gangers to report promptly every place where they work, especially where military posts are far apart or do not exist.
7. Level crossings do not present any great difficulty as it is unlikely that mines will be placed on these.
8. People and cattle walking on the line spoil the seal."

A very negative report, reiterating some of the points made in the earlier letter. Item 7 is of interest as it indicates that the perpetrators of sabotage would be expected not to place their own people and property in danger!

As an Appendix in the file is a whole sheaf of papers generally headed:

INTERFERENCES WITH TRACK ETC.

It commences with a neat typescript account and then continues in manuscript with notes and additions to the typescript. Occasional words are hard to make out. Nevertheless, one can get a feel for what it must have been like to be guarding a bridge or walking a line in the middle of the night, waiting for a shot out of the darkness. The report covers effectively just one eventful month, with 78 reported incidents.

27.04.36. 06.10. Reported by patrol all bolts removed from two rail joints at K. 79.900 South of Qalqilya Station.
28.04.36. 06.30. Patrol caught boys placing stones on line at K. 162.900 near Beit Jirja.
03.05.36. 16.09. Engine of passenger No. 9 struck two bearing plates placed on rail at K. 72.500 near Tayibe.
04.05.36. Early morning - patrol reported traces of an explosion under the rails at K. 70 Tulkarm-Qalqilya Section.
09.05.36. 04.22. Motor trolley patrol discovered a rail removed entirely from track at K. 102.400 near Wilhelma - and telegraph wires cut.
11.05.36. 16.45. Motor trolley patrol struck two plates which had been removed from rail joints and placed on the rail. Trolley put out of action. (At N. end of Wadi Ghuzze bridge).

12.05.36. 05.30. Patrol found all telephone wires cut and a charge of gelignite placed on a sleeper at K. 65.020 near Deir Esh Sheikh. A later search revealed 17 more pieces of gelignite under the track.
12.05.36. 05.00. Patrol found a bridge at Kilo 75.152 between Tulkarm and Qalqilya damaged by an explosion - a hole 120 cm x 90 cm x 70 cm deep blown out of one of the stone piers.
12.05.36. 06.00. Patrol found 3 stones removed from a culvert at Kilo 74.950 between Mas'udiya and Nablus and at Kilo 75 eight clip bolts and one fishplate removed from the track.
12.05.36. 12.30. Motor trolley patrol found 16 dogspikes and some stones on the rails at K. 82.800 near Qalqilya village.
12.05.36. 16.00. Patrol found 16 clip bolts unscrewed at Kilo 25.800 near Er Ramle.

13.05.36. 04.45. Motor trolley patrol found 2 fishplates removed from the track at K. 88.600 near Ras-el-Ein.
13.05.36. In evening, foot patrol noticed parties of men congregated on the Railway at Kilo 101.500 near Wilhelma who dispersed on hearing push trolley approaching. Also at Kilo 98.900 a foot patrol saw a horseman and 5 or 6 others congregated on track but passed on without damaging the line.
14.05.36. 22.00. Two Railway patrol men fired at in the vicinity of Kilo 118.950 main line.
15.05.36. 03.00. Patrol found stones on the rails at Kilo 60.800 between Beisan and Jisr El Majamie and on return journey he found two fishplates loosened at same spot.

16.05.36. 08.00. Patrol found 100 metres

of rail covered with stones at K. 155.100 between Majdal and Deir Suneid.
16.05.36. 07.30. Patrol found a mills bomb just inside the rails at K. 98.400 between Kafr Jinis & Ras El Ain.
16.05.36. 19.52. Engine derailed on an obstruction (stones) placed on the line at entrance to Haifa station.
16.05.36. 23.06. All telephone wires cut beyond Gaza.
16.05.36. 05.45. Patrol found three fishbolts and all bearing plates and dogspikes removed from a rail at Kilo 14.500 on Jaffa-Jerusalem line near Saffriya village.
16.05.36. 23.00. At Kilo 86.044 near Jaljulia two platelayer patrols men were blindfolded and bound by armed men who placed explosives on the bridge and blew off a length of one metre of stone facing.

17.05.36. 05.00. Push trolley patrol found a piece of iron wedged in a rail joint at Kilo 57.900 between Artuf and Deir Esh Sheikh.
17.05.36. 05.50. Bridge reported destroyed by explosive at K. 3 on the Tulkarm - Mas'udiya Line.
17.05.36. 06.40. At K.8.400 HR main line Sentinel Cammell Car hit an obstruction on line, stopped and found rails unbolted.
17.05.36. 22.30. All telephone wires cut except Jaffa trunk line between Binyamina and Kilo 88.
17.05.36. 00.30. Patrols heard loud explosion in vicinity of Kilo 15 on Jaffa Line. They stopped a goods train which was approaching and on investigation found a hole in formation with a dead body lying in it. The explosion had completely lifted two rails out of the line, broken a sleeper, displaced others and made a hole in the ballast.
17.05.36. 00.30. Two kilometres north of Ras El Ein the telegraph, telephone etc. wires were completely cut through in 5 places. No damage to track probably because there was an armed patrol on this section.

18.05.36. 11.20. Pieces of iron found by patrol between rail joints at Kilo 56.995, Jaffa-Jerusalem Line.
18.05.36. 11.20. Stones found removed from masonry of bridge at Kilo 57 main line.
18.05.36. 16.30. As train No. 19 left Tel Aviv a bomb was thrown from train and fell on edge of platform at Sarona Road end. Damage negligible.

19.05.36. 00.55. All telephone wires reported cut between Ras El Ein and Qalqilya and between Qalqilya and Tulkarm.
19.05.36. 05.25. Fishplates found by patrol removed from the track at K.76.900 between Tulkarm and Qalqilya.
19.05.36. 05.35. Reported by patrol that the bridge at Kilo 145.500 near Ashdod damaged by explosive and damage to the track but reported still safe for traffic. [NB Note use of name "Ashdod" rather than "Isdud".]
18.05.36. [sic] 05.00. Piece of iron found wedged in a rail joint at Kilo 57.900 between Artuf and Deir Esh Sheikh.
19.05.36. 06..00. Patrol reported both sides of bridge at Kilo 63.220 between Qaqun and Tulkarm damaged by explosive but bridge still safe for slow traffic (15 k.p.h.)
19.05.36. 06.00. Patrol reported that the middle of the bridge at Kilo 10.400 on the Nablus line blown by explosives - extent of damage not yet known.
19.05.36. 10.15. Stones thrown at platelayer patrols at Kilo 109.
19.05.36. 20.10. Timbers loaded in a truck at Acre caught fire. Fire extinguished at 20.40 hours.

20.05.36. 06.35. Kilo 58.600. Two kilometres of telephone lines pulled down.
20.05.36. 08.00. Fishplates found broken at K. 69.550 Mas'udiya - Nablus.
20.05.36. 10.30. Between Jaffa and Tel Aviv stones thrown at and Railway men chased off the line.
20.05.36. All wires cut at Kilo 203.110, K. 203.300 and K. 203.380.

21.05.36. 06.35. Kilo 59.600 bridge damaged by explosives.
21.05.36. 06.35. Wagon set alight in Lydda station. Hay contents burned and wagon badly damaged.
21.05.36. 08.00. A rail joint disconnected and removed from track at Kilo 73.318 near Nablus.
22.05.36. 05.00. Bridge at Kilo 130.490 found damaged by an explosive.

23.05.36. 05.15. Kilo 41.260 H.R. reported that at 03.40 rail was found removed from the track.
23.05.36. 06.30. At 21.15 hours all telephone communications cut beyond Kilo 70 P.R. main.
23.05.36. 07.00. Two rails found removed from track at Kilo 73.900 near Nablus.
23.05.36. Kilo 28.150 P.R. main - explosive broke sleeper.
23.05.36. Kilo 29.700 P.R. main - sleeper found burning.
23.05.36. 12.00. Train ran over a stone and cork belt placed on the track at Kilo 0.900 near Herzl Street. [Jaffa].
23.05.36. 22.15. Constable on duty at a bridge near Wadi-Es-Sarar found a party of men placing a full size rail across the line at Kilo 36.400. Shots exchanged and marauders dispersed on arrival of military patrol train.

24.05.36. 03.30. Four fishplates found removed from the line at Kilo 69.500 between Tulkarm and Qalqilya.
24.05.36. 22.30. Military motor trolley patrol fired at at kilo 69 near Tulkarm and at platelayer patrol just prior to arrival of trolley.
24.05.36. 22.30. Telegraph wires at K. 70 found cut and also between Hadera and Tulkarm and at K. 80 and at K. 198.400 on the main line.
24.05.36. 23.00. Track at K. 28.134 near Tantura damaged by explosion.
24.05.36. 21.40. Platelayer patrols fired at at K. 118.800 and at Kilo 118.000.

25.05.36. 01.15. Kilo 71 P.R. shots fired at military patrol train.
25.05.36. 03.30. Bomb on bridge at Kilo 173.174 P.R. main. No damage.
25.05.36. 04.30. Bomb at bridge Kilo 62.720 H.R. main line. No damage.
25.05.36. Kilo 130.490 bridge damaged by explosive - Caution imposed.
25.05.36. 09.00. Rail found damaged by explosive at K. 74.080 near Nablus.
25.05.36. 12.00. Large number of stones found on line at Kilo 177.500 near Gaza.
25.05.36. 05.40. A bomb found placed on the points leading to the Pardess siding at Rehovot.
25.05.36. 21.00. Four platelayers on patrol met with band of armed men in the vicinity of Saffriya on the Jaffa line who compelled them to sit aside until the push trolley patrol arrived at 23.00 hours.
25.05.36. 23.30. At K. 151.240 platelayers patrol found a sleeper blown up by explosives.
25.05.36. Exploded bomb found under the sleepers over the bridge at K. 60.065 on Haifa - Samakh section.

26.05.36. 01.15. At K. 120.850 the platelayers patrol were fired at.
26.05.36. 04.30. Patrol found 7 sticks of gelignite placed in the ballast under the sleepers in the middle of the bridge at K. 3.460 between Tel Aviv & Lydda. Four attached but not lit.

27.05.36. 19.20. Wires cut between Jerusalem and Battir.
28.05.36. 0115. Labourer patrol fired at at bridge at K. 109.490 north of Lydda station.
28.05.36. 02.00. 2 kms. S. of Khan Yunis body of men discovered by mil. patrol on trolley who fired a Verey light & opened fire with Lewis gun & the men dispersed.
28.05.36. 19.00. Super. Police guarding bridge at K. 58 J-J line fired at.
28.05.36. ... (?) to circulated to Traffic staff at Lydda calling them out to strike "to save the country".
28.05.36. 22.300 kms. washout between Tulkarm & Qalqilya.
29.05.36. 03.00. Mil. patrol trolley fired on by band of 20 men. Patrol replied with Lewis guns. No. of Ras el Ein.

MILEPOST 47 EGYPTIAN STATE RAILWAYS

85:10

By Colin Jacks.
From 'Black Eight' 1/2002.

Shortly after my eighteenth birthday, having been employed on British Railways Western Region for some three years, I was summoned to attend a medical examination to see if I was fit for military service, known to one and all, in my era, as 'National Service'.

Having past the medical 'A1' 1 now awaited the buff envelope marked O.H.M.S. which duly dropped through the letterbox. It said that I was to report to 7 Selection Training Camp Royal Signals at Catterick Camp on the 21 . June 1951. Also enclosed was a travel warrant from Birmingham New Street to Richmond [Yorkshire]

After four weeks Basic Training and twenty-six weeks Trade training, 1 was trained as a wireless operator; we were all sent on embarkation leave and ordered to report back to our holding camp at Pocklington in Yorkshire to await our postings to wherever. Eventually the day arrived and when my name was called out '618 Jacks' along with another chap 1 was posted to Sudan Signal Squadron in Khartoum, unlike some of the other postings I was well pleased.

In February 1952 we left Liverpool aboard the M.V Georgia bound for our first stop, the Great Bitter Lakes roughly halfway down the Suez Canal. Arriving at Port Said on a Sunday morning, where the convoy was formed up to sail down the first half of the canal I noticed that there were plenty of railway tracks but no trains, perhaps the Egyptian State Railways didn't run a Sunday service 1 thought. Progressing slowly down the canal I noticed that at times the railway line ran quite close to the canal, but still no trains.

Arriving in the Bitter Lakes we were to disembark, the reason for this was we had to have a Yellow Fever inoculation and the certificate to go with it required to enter the Sudan. We went into a transit camp, had the jab and after waiting ten days to see if it had taken we were put aboard the first troopship going to Port Sudan. The journey from the Bitter Lakes to Port Sudan then to Khartoum by train is a story in itself, as was a further posting up into Eritrea by steam hauled train, charabane, and then diesel railcar. However my stay in Eritrea was short as the British Mandate governing the country came to an end and 1 was posted back to Egypt.

Once 1 had settled down in my new camp it didn't take long for me to go and explore the railway line that ran just across the road. It was the Port Said to Suez line. My regular spot was by Milepost 47, at least 1 think it was miles and not kilometres, where the 47 was from 1 was never sure, possibly Suez. Naturally the figures on the milepost were in Arabic so one of my first priorities was to learn these numerals so 1 could convert it back into English.

The line at this point was double track, coming up from the Suez direction was a long old drag and when I spotted smoke from the approaching train I got quite excited at the prospect of seeing my first Egyptian loco. As it got closer 1 began to think that the midday sun was playing tricks with me but sure enough when the loco came hammering by it was none other than an old Great Central 2-8-0, an R.O.D. 1 could hardly believe what I was looking at, its crew shouted something at me [possibly swearwords] I waved back and the loco and train continued northwards.

As there was no signalling on this part of the line all 1 could do was to watch and wait and 1 didn't have to wait long for coming southbound was my next train.. Once again I stared in amazement for at its head was none other than a Stanier 2-8-0 8F. It came rattling by under easy steam down the gradient. Another shout from its crew, another wave in return and it was fast disappearing out of sight into the wide expanse of desert.

The 8F was fitted with a large headlamp on the smokebox top, a cowcatcher and was oil burning.

I was beginning to wonder whether I would see a pukka Egyptian loco. I didn't have to wait long for the next train. A northbound was approaching, this time hauled by a very British looking 2-6-0 tender engine. It was a simple basic design but at least it was one of the home breeds. I returned to the camp and was determined to spend as much time as I could by my milepost, and to get a decent camera to record the passing scene.

Milepost 47 of the Egyptian State Railways (mileage assumed to be from Suez) March 1953

Each spotting trip, now armed with my new camera, a pencil and my conversion table, Arabic to British numbering, I spent many happy hours my MP 47. Photography I found somewhat difficult with the very bright sun which seemed to be always shining directly overhead - I always had a problem of getting the exposure correct resulting the wheels and motion being a trifle dark.

A treat during the afternoon was the only passenger train of the day heading southbound. It may have come from Cairo or Port Said, 1 was never able to find out. It was always hauled by a very elegant-looking 4-4-2 tender loco, once again although foreignbuilt it was very British looking. I never did see the northbound train which I presumed went up during the morning, as train-spotting during the morning was not compatible with army life. I did see other passenger trains hauled by the 2-6-0's and one passenger train was hauled by a 4-6-0 though in the main they were 'Atlantic' hauled.

One particular morning I was part of an escort troop with a motor convoy. Shortly after we had left the camp we were held up at a level crossing in Fayid. After a bit of pushing. and shoving 1 managed to point the camera at the passing train, just another 8F but this time it was highly polished and sporting a nameplate attached to the framing above the driving wheels. It was obviously a military loco but the photograph was hurried and though a small print looks acceptable the subsequent enlargement shows up all that was bad with my photography. The 8F I think was, after doing a bit of detective work, No.70516 'Cpl. J. Ross V.C.' but I'm not one hundred per cent sure.

As the weeks rolled by 1 spent many happy hours at the lineside taking what photographs 1 could. Perhaps the most abiding memory of my many lineside visits was that of a freshly outshopped R.O.D. in shining black livery with silver boiler cladding bands. Another feature of this class, many of the ones 1 saw had the first section of the coupling rods removed thus making them into 4-6-0's or maybe 2-2-6-0's!

THE HEJAZ RAILWAY IN 1908

85:11

The 'Geographical Journal' of 1908 (no other date available, but pages 570-585) published an article, possibly orginally a lecture, by Lieut.-Colonel F. R. Maunsell, a copy of which was recently purchased by the Editor. It reads:-

"The Hejaz railway has many remarkable features which distinguish it from other lines. Its principal object is to provide a means for faithful Moslems to perfom their pilgrimage to the holy places of Mecca and Medina with a greater degree of comfort than formerly. There are still many of the more rigidly orthodox who prefer the long tedious journey by camel, with its fifty-two stages from Damascus to Medina, and count the hardships involved as part of the duty of pilgrimage. The railway also has the object of binding together some outlying provinces of the empire to the centre. Its inception is due to the initiative of the present Sultan, and the enthusiasm created by this first announcement brought in subscriptions from the faithful in all parts of the Islamic world. A special stamp-tax forms a solid annual contribution to the expenses, somewhat less evanescent than other contributions may prove to be.

Geographically, the line has provided a means of travel in a country with a fascination of scenery quite peculiar to itself, and unlike any other part of the world. Instead of traversing populous countries and great cities, it seems to delight in passing through immense solitudes - through a country peopled mainly by the spirits of the Arabian Nights, where little surprise would be occasioned in finding a roc's egg in some inhospitable rocky valley, or in seeing a genie floating in a stream of thin vapour out of a magic bottle.

The line commences at the traditional parting-place of the Great Pilgrimage, the Bawaubet Allah, or Gate of Allah, and the first station is the Kadem-i-Sherif, the noble starting place, shortened in vulgar parlance by the railway porter to Kadem. At first the line traverses the Hauran, running parallel to the French Hauran railway. From ancient times the district has been an extremely rich one, and the Romans used it as a granary. Both lines of rail find sufficient traffic, besides which the opening of the Hejaz line has been a means of opening up the trade of the Jebel Druz or Druse mountain, which sends its trade to Ezra and other small stations in that vicinity. The line, moreover, has brought general security, and the area under cultivation is increasing. From Deraa a branch runs to Haifa, on the Syrian coast, where a harbour is to be constructed. Quite a good restaurant exists at Deraa, and there is an increasing tourist traffic on this part of the route.

The richness of the Hauran is undoubtedly derived from its volcanic origin. Distinct layers of basalt can be traced in the side ravines of the Yarmuk, while on the east the line skirts close to the curious volcanic mass of the Leja, which has been cooled at a more recent date, and is still in the form of a wild tumbled mass of black scoriated rocks strewn to some 30 to 40 feet deep.

The deep, narrow ravine of the Yarmuk, the ancient Hieroymax, which the line follows in its descent to the Jordan, present several difficulties of engineering successfully overcome. Large numbers of Italian, Montenegrin, Croatian. Greek, and other European workmen had to be employed on the difficult rock cuttings, tunnels, and viaducts of this section.

The Jordan valley, where the line crosses it, just south of Lake Tiberias, is 800 feet below the Mediterranean level; but the difficulties of construction cease when the Yarmuk valley has been successfully traversed, and the ascent to the sea is made by easy gradients.

South of Deraa the main line soon leaves the richer corn land, and enters an upland undulating country, the land of Bashan, producing abundant grazing in the spring. At that season troops of gazelle roam about the country, and the Bedawin with vast herds of camels are found close to the line.

At Zerka the line descends into a long ravine in a limestone country, having a good stream in the valley. Here are reached some villages of Circassian settlers, who have worked wonders in restoring the ancient fertility of this district. The ruins of Rabboth Ammon are close to the modern station of Amman, another Circassian outpost on the line. The line winds steeply out of the valley, which follows a deep-cut ravine in its course to the Dead Sea below Amman. Fertile cultivated ground continues for some miles past the ruins of Mshatta, and then the line leaves what may be called the last cornfield and plunges into Arabia Petraea. The landscape gets bleaker as the train moves south. The mountains of Moab are passed some distance to the west, and the trace is laid far out in the desert, where the valleys are wide and easy to cross, and before they deepen into narrow ravines as they enter the mountains.

The old pilgrim route is followed very closely throughout, and at the stations the stone cisterns and reservoirs to provide a supply of water to the pilgrims are noticed. Water becomes very scarce; in a few places wells have been dug, and water is raised by wind-pumps. For some reason, boring for artesian wells does not seem to have been tried. One attempt was made in rocky ground, and when the drills broke no further attempts were made.

As the line approaches Maan an extremely desolate country is traversed; low ranges appear to the east, apparently of sandstone or limestone formation, although the ground is strewn thickly with black fragments of obsidian along some sections of the line. The ravines now trend eastward to lose themselves on a wide depression in that direction, as shown in the recent maps of this country by Prof. Alois Musil. Maan is the first point since Amman where water is procurable in any quantity, either from springs in the small town itself, or from wells at the railway station. The place is a large railway [sic], with several stone buildings for officials, a small shop for temporary repairs, a hospital, and quite a good hotel, a substantial building rather small in size. The small town, containing some good stone and mud houses, is not visible from the railway, but lies behind a hill nearly a mile off. Two copious springs supply the necessary water.

Date palms are reared, small gardens with various kinds of fruit trees, and a few fields of corn are visible, but from a little distance the place is little else than a drab patch on a grey landscape. Its principal distinction is its proximity to the rock city of Petra, a ride of some eight hours to the west among the Moab hills, The climate of Maan is invigorating both in winter and summer, as the place stands 3525 feet above sea-level, surrounded by the dry, invigorating air of the desert. The principal drawback are the severe duststorms. Rain is not uncommon in the spring, and then a tinge of green spreads over the landscape. The ancient fortress of Petra and now Maan owe their importance as standing at the gate of Arabia, and forming the last outpost of Syria and Western civilisation before the long dreary stages of the northern Arabia journey. For countless ages, long before the present pilgrimages, this was the route by which the gold, frankincense and Arabian products found their way into Syria; but the Suez canal and steamer transport by the Red Sea seem to have abolished all, or almost all, trade prospects, and only the pilgrims remain.

On leaving Maan, it may indeed be said that all hope of dividend is left behind, and the line enters a spirit world without towns or even inhabitants. The stages south of Maan, the old pilgrim route, were the most desolate of all, and the way was always strewn by dead or dying camels as the caravan toiled along. The line crosses a constant succession of small wadis trending towards the depression mentioned as lying north-east of Maan, and some low bushes and vegetation appears.

Some 50 miles south of Maan comes the most remarkable change in the landscape, and the veritable gate of Arabia and the home of the genie is at last reached. The line arrives quite suddenly at the edge of the curious escarpment known as the Batn-el-Ghrul [sic], or the Hollow of the Genie.

From the station of Batn-el-Ghrul, at the top of the descent, the traveller can walk to the edge of the cliff and take in the immense extent of view which unfolds itself to the south. The escarpment is visible for some 20 miles to the east, and is a sheer cliff without, it is said, a single passage of descent, and, although perhaps footpaths could be found, this looks to be the case. For some 15 miles to the west, also, the escarpment is fairly well defined, until it merges in the high ranges overlooking the Gulf of Akaba. The pilgrim route follows the descent close alongside the line, and is comparatively easy. The principal descent is from 3207 feet at the summit to 3278 at the foot of the escarpment, or 329 feet altogether. [sic! No-one seems to have noticed this discrepancy. Ed. 3278-329 is 2998; 3278-3207 is 71; but normally the summit of an incline is higher than the foot..... Maybe the Genie was at work here.]

The view from the summit is extremely striking, and comprises a great inland depression, walled in by a continuation of the escarpment on the east, and glowing throughout in the most brilliant and striking colours. The prevailing note is bright red and yellow, changing to violet, purple, and black, so that every tint, except green, seems to be supplied. The escarpment is of sandstone, which seems to have worn away in some places to sand drifts of all colours, but principally red and yellow. The spurs of the Tel-esh-Shahim, which run out parallel to the line, are covered with glistening black rocks, at first sight volcanic, but, as I was told by an engineer, were really of sandstone blackened by the intense heat of the sun. The depression extends south as far as the gorge near Kelaat-i-Akhdar, a distance of about 120 miles.

In this clear, dry air every feature is visible. A number of isolated flat-topped hills form the Haraat-i-Ahmar about midway down the valley, and the great pinnacle of Jebel Sherora is visible near the extreme end. To the west, the watershed which divides from the Red sea is clearly traceable in a range of dark purple hills, the summits serrated in all sorts of fantastic shapes, probably due to volcanic action and without the softening influence of a rainy climate.

The railway accomplishes the descent of the escarpment in two loops, which form a clever piece of engineering, after which the Wadi Rutm, a sandy ravine about half a mile wide, flanked by two ridges of sandstone, is followed for a few miles. South of Wadi Rutm station the line enters definitiely the open depression, with the escarpment still traceable in red and yellow sandstone some 20 miles to the east, and the black jagged edge of the Red sea watershed to the west. Inquiries regarding the country to the east

gave it as an almost waterless region, although a route does exist from Maan to Jauf, along which some scanty wells can be found.

Towards the Red Sea the district is known as el Hisme, and is said to contain a few villages, and a sufficient supply of water from small springs. At Kalaat-i-Mudeverre, the first water since Maan is obtainable from a station well with a wind-pump, and another well near the old castle on the pilgrim route about 22 miles to the west. There is little trouble on the line from sanddrifts, as a hard surface can easily be found, and rocky ground is seldom far distant below the surface.

At Zat-el-Haj a group of a few palm-trees represents the first vegetation since leaving Maan. An interesting old masonry fort commanding access to the well, and representing a halting place on the pilgrim route before the railway was opened, is the only building on the landscape here. An endless series of beautiful mirages unfolding themselves as the train toils slowly along these two lines of steel leading through an endless expanse of sand and rocks varied, with an occasional volcanic outcrop raising black-topped hills.

At Tebuk, 430 miles from Damascus, is the first oasis of any size, and here a depot has been formed, at which the railway can recoup itself before another long stretch of nearly waterless desert is entered and the next depot at El Ula is reached. A group of buildings for the employees, a small repairing shop, and a hospital with sixty beds, form the principal part of the depot.

Tebuk consists of a group of date palms about half a mile square, deriving water from a large spring, walled round in a concrete basin, and watched over by another of the masonry forts which mark a pilgrim station. Altogether there were about sixty mud houses with a few walled gardens belonging to the permanent inhabitants of Tebuk. All that were seen were of a distinctly negroid type, different to the nomad Bedouin. The surrounding country is but sparsely inhabited by Arabs of the Beni Atiye tribe here, and the Huweitat farther north. Besides date palms, there are in the gardens a few lemon trees and pomegranates, and outside are some few fields of wheat cultivated principally as green fodder. The Italian engineer in charge of this section had managed to make a garden in the sand, where by means of irrigation he grew most kinds of European vegetables, but none of the inhabitants seemed inclined to copy his example.

East of Tebuk the escarpment is about 15 miles distant, and prominent in the main ridge there is the remarkable hill of Jebel Sherora, or the Fire mountain. It has extremely steep stony slopes and a flat summit, from which a most extensive view must be obtainable over the unknown country to the east.

It seems certain that Mohamed visited Tebuk in his earlier wanderings, and tradition refers to Jebel Sherora as the Pulpit of the Prophet, probably from its commanding position overlooking all the surrounding country. To the west is still visible the dark serrated ridge which forms the watershed with the Red sea.

The rainfall in this country is extremely capricious, and perhaps two or three years may elapse before there is any appreciable fall here, although at Maan there appears to be always some rain in the spring. Quite heavy rainfalls do sometimes occur in Tebuk, as, for instance, in 1907 some 5 feet of water flowed for a short time down the Wadi-et-Til and under the long railway bridge of twenty arches which spans it. The rainfall tends to form temporary lakes in certain wide hollows, the largest being between Tebuk and Jebel Sherora, which receives the Wadi-el-Til and Wadi Akhdar from the south, both of them of considerable size, especially the latter, which has numerous tributaries. Other smaller wadis enter the depression from the north, and sometimes the lake remains sufficiently long to breed mosquitoes in Tebuk. The water from Kalaat-i-Mudeverre and Zat-el-Haj runs into smaller depressions near those places and also evaporates under the intense heat of the sun. After rain, green vegetation springs up along the wadis. In the Wadi-et-Til (or Ithil) is a fringe of low trees of a kind of tamarisk (Tamarix articulata). There is also a species of low acacia, and some smaller shrubs.

Of animal life, there appears to be very little. An antelope which the Turks call a wild cow, but which looks to be Oryx beatrix, is to be found in this district, but only in small numbers. The large troops of gazelle seen north of Maan do not roam here. It is said that the ostrich is occasionally found, and the skin of one specimen is preserved in Maan station.

The desert air is extremely dry and clear, always invigorating, and even the great heat in summer is not as insupportable as in a damper climate where the thermometer is probably lower. Climate has, without doubt, a great effect on the human character and intellect, and the nervous, high-strung temperament of the Arab is to a great extent the creation of his environment of desert, with its splendid mirages to fire the imagination and sparkling air to keep the nerves always alert.

South of Tebuk the line continues over the plain until the southern edge of the depression is reached at Dar-el-Haj, where the hills close in, and after passing through a short tunnel the line enters the narrow valley of the Wadi Akbar. Construction is easy, as the gradient is gradual and the valley floor is nearly level and about half a mile wide, but bordered for most of the way by sharp lines of sandstone cliffs.

To the eastward is the volcanic mass of the Jebel Awerid, a very difficult country to traverse, and with no distinguishing peaks or features.

Want of water is again a great difficulty, and the small posts have to be supplied daily from the train. At Kelaat-i-Akhdar is a small spring, and at El Muadhem is a cistern depending on rain-supply; at both these places are the small forts which denote halting-places on the pilgrim route. At Dar-el-Hamra is reached the summit of the watershed between the Wadi Akhdar flowing into the Tebuk depression, and another wadi, tributary to the Wadi Hamd, which flows to the Red sea.

At Medain-i-Saleh the valley widens a little, and here are found some rock-cut tombs similar to those at Petra, but far fewer and less ornate. Traces of a town exist, but there is nothing now visible except the usual fort of the pilgrim. Here again, as at Tebuk, the site would seem a favourable one for trying artesian wells, but no attempts have been made to prove their success or otherwise. This place and El Muadhem are the first points on the line from which routes lead eastward into the heart of Arabia. The curious town of Teima, visited by Doughty and Euting, lies east of El Muadhem, and from both places routes lead to Hail, the capital of Northern Nejd.

At El Ula the first small town is reached, a place of about 3500 inhabitants, partly negroid and partly mixed Arabs, in an oasis of Palms and gardens about 4 miles long, watered by some springs. Here the last depot before Medina has been constructed, similar to Maan and Tebuk. Construction onward to Medina is not difficult, as the valleys branching north and south at the head of the Wadi Hamd can be followed even up to Medina itself. Between Medina and Mecca the line makes a westerly bend, passing through Sherm Rabigh on the Red sea, this having been found the easiest line for construction.

The permanent way has been laid throughout by Turkish soldiers; but the station buildings, all of very solid masonry, as well as bridges and culverts, of which there are a great number, have been constructed mostly by Italian workmen, with some Greeks and Montenegrins. As many as three or four hundred Italian workmen were employed at one time on the works near Tebuk, and so little did fanaticism come into play, that they built the fine new mosque at Tebuk. Subsequently they instructed some Turkish engineers, who continued the work from El Ula to the holy city itself.

It is difficult to think of this railway becoming a great highway or developing any great trade with Central Arabia, as the section from Maan to Medina traverses an unproductive country without possibility of development, and the interior of Arabia has no surplus products to dispose of. In any case, when the line reaches the sea at Sherm Rabigh, it is probably that any trade, either export or import, to Medina or Mecca will pass through that port in preference to the long land journey.

The following summary of distances shows the extent of the line:-

Damascus to Maan. 285 miles.
to Tebuk 430 miles.
to El Ula 609 miles.
to Medina. 820 miles.
to Mecca. 1097 miles.

The general height above sea-level is about 2300 feet, although at Maan it rises to 3525 feet and at Dar-el-Hamra, the watershed of the Tebuk depression and the Wadi Hamd, it attains 4200 feet, which is the highest point.

The gauge of the line is the somewhat curious one of 1.05 metre (3 feet 5 1/4 inches), which was necessary when the line was first commenced to correspond with the gauge of the the Beirut - Damascus line, over which the rolling stock had to be brought. The branch to the Mediterranean at Haifa was constructed subsequently. The rolling stock has been obtained principally from Belgium, with the exception of the engines, which are made by a German firm. The rails were supplied by the American Steel Trust, by a French firm domiciled in Russia, and by the firm of Cockerill, in Belgium.

The engineers in charge of sections were also of various nationalities - French, Poles, Hungarians, etc. - while the guiding spirit in the construction has been Meissner Pasha, a very able German engineer. But besides these, the general direction has been under Marshal Kiazim Pasha, to whom the greatest credit is due in bringing the line successfully into Medina, and to Hajji Mukhtar Bey, a brilliant Turkish engineer who has absorbed all modern methods of construction, and completed the last section into Medina without European assistance.

In conclusion, it is difficult which to admire the most, this far-reaching conception of his Majesty the Sultan to build the line and thus to further the interests of his religion and bind together the outlying portions of his empire, or the silent unswerving devotion of the Turkish soldier who has carried the matter to a conclusion, and who watches without complaint over miles of line through a country almost without water or inhabitants."

Note -The description implies the extension from Medina to Mecca was almost ready! In practice this section was never even begun. Ed.

85:12

SANDSTORMS.

Ths is incident has been reported several times, from Sybil comes the official report from the 'Palestine Post' of 30th. March 1944 p.1:-

"Haifa, Wednesday. Food had to be dropped by parachute from RAF aircraft this morning to passengers in a train which was marooned on Monday night by the worst sandstorm experienced in recent years in the Sinai Desert. The operation was carried out near Romani, some 40 kms north of Kantara, where the train is stranded among large sand-dunes over 40 inches high blown against the railway tracks.
The parachute rations will last the passengers for 48 hours, but it is hoped to free the train within the next 12 hours.
Other Trains Stranded.
Other trains cut off by the sandstorm included the regular Haifa-Cairo one which left here on Monday and was stranded at Bir el Abd, 35 kilometres north of Kantara the same night; and the Cairo-Haifa train which reached Kantara on Monday night and is still held up there.
Passengers on the former train have been supplied with food by an RAF detachment and by a relief works train. It is hoped to clear the train tonight and it will then be towed back to Gaza. A works train is also attempting to bring relief to the stranded train near Romani and have already cleared the line up to some 35 kms. from Kantara. It is expected that it will succeed in cutting through the remaining five kms. of sand some time tonight.
An army of some 600 workmen is engaged on the clearance work and contact with the isolated trains is being maintained over the railway telegraph system. Apart from the three blocked trains, an engine was derailed by sand at Kilo 356 (?) and the crew is stranded in mid-desert.
The clearing work is hampered by the changing wind conditions, which often blow sand back into the cuts dug out through the sand-banks. Depending on wind conditions, it is hoped to clear the line by tomorrow when traffic will be restored to normal."

STEAM/DIESEL COMBINATIONS ON IR

85:13

By Paul Cotterell.

Double-heading was relatively little used on PR and IR. As a rule there was no need for the extra power; most lines are fairly flat and most trains fairly light. A notable exception to this in our own time is the Negev Desert where steep gradients are encountered and the mineral trains are heavy. Another line where double-heading could regularly be seen is that to Jerusalem. Photos of double-headed diesels on the Jerusalem line are quite common, but I only know of one showing steam and diesel locos working the same train. This was taken by Hugh Ballantyne at Bet Shemesh in May 1954 and appeared as Plate 96 in my book. Interestingly, the train has come downhill so the extra loco was unnecessary for providing power unless, perhaps, SAFB 102 had conked out somewhere along the way. I think it more likely, however, that Baldwin 4-6-0 892 was simply stuck on the front as a convenient way of working it down from Jerusalem, and that it may well have come off the train at Lod.

Obviously there was only a short period of maybe a few years when such steam/diesel double-headed combinations could be seen in Israel, as was the case in Britain during the transition period in motive power on BR especially in the early to mid 1960s. A few Accident Reports turned up by Evyatar Reiter in the IRM Archives bear witness to other examples of Israeli steam/diesel pairings, and are set out below.

1. At 19.05 on 20/9/1956 when G12 110 and Baldwin 4-6-4T 14 were shunting some wagons from freight train No.258 on track 1 at Nahal Soreq station, two wheels of wagon No.2523 derailed, apparently because someone forgot to remove the chock which had been placed under the wagon to prevent it running away during the shunting operation.
2. On 28/9/1956 4-6-4T 14 was again involved in an incident of another sort, this time double-heading with SAFB 103. Shots were fired on passenger train No.216 from across the border at Km 77. Nobody was hurt.
3. At 17.15 on 5/10/1956 as the station master at Tel Aviv Darom shunted a rake of tank wagons from freight train No.357, double-headed by Baldwin 4-6-0 891 and G12 108, from track 3 to track 5, he gave hand signals to the driver to stop. The driver failed to do so in time and the tank wagons collided with others standing on track 5, damaging the buffer stop and derailing open wagon No.6219. This wagon and the displaced buffer stop ended up through the fence and projecting into the adjacent street.

These three reports only cover a period of two weeks. It is logical to suppose, assuming a continued research commitment by Evyatar, that further such examples of steam/diesel combinations will surface.

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Brookville 60cm
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