

ACC

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REPORT
JUN. 1944

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REPORT OF INSPECTION OF THE
JUN. 1944 PERMANENT WAY-SICILIAN
RAILWAYS

EMM/afh

HEADQUARTERS
ALLIED CONTROL COMMISSION
Transportation Sub-Commission
AFO 394

Our Reference : ACC Th/254/1

Date : 11 June '44

TO : Lt. Col. L. E. Vining, Director,
Transportation Sub-Commission, ACC.

SUBJECT : Report of Inspection of the Permanent Way - Sicilian Railways.

The whole of the Sicilian system is single track with passing loops in stations and sidings at various points.

The mileage is quoted as follows :-

Standard Gauge Line	Length in Metres	Approximate Number of Sleepers
Main Running Line	1,300,000	1,700,000
Sidings	326,000	420,000
Narrow Gauge		
Total length including Sidings	300,000	1,000,000

Standard flat bottom construction is used with rail weighing 36 kilograms per metre (approx 78-lbs per yard). Purpose made square headed coach screws as used for fastening the rail to timber sleepers.

Originally the lines were laid with male oak sleepers, but in recent years fir or beech has been used, the life of which is quoted as being from 9 to 12 years.

The roads are ballasted with stone of no particular screen gauge but generally the size is such that it would pass a 4 inch mesh which is far too large to obtain a good top.

It is understood that all ballast is prepared locally by hand; no crushing machinery being available. The boxing up is far too high and lines in the open have the entire sleeper buried beneath the ballast with the result that neither sleeper or fastenings can be inspected, hence daily routine jobs are neglected.

It is alleged that this procedure has been ordered by the Head Office of the Italian State Railway to prevent track fires but it is interesting to note that in tunnel sections the sleepers are entirely uncovered and no cases could be quoted of fires as a result of the exposed sleepers.

Maintenance renewals are carried out by spot patching both with regard to rails and sleepers and no section is ever relaid in its entirety as is the British practice. It was impossible to carry out a complete inspection of the system on account of time and that only sections from which the ballast had been removed could be examined. It was therefore decided to pick out from uncovered lengths all over the system at as widely separated points as possible to obtain an average picture.

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The general state of maintenance is poor due to the neglect of some years standing.

Every single length inspected had low joints, due to bad packing of the joint sleepers resulting in a permanent set of the rails. No attempt is ever made to correct this either by the use of shin plates or packing the end three sleepers of each rail on the high side to allow for subsequent ironing out by the passage of trains. Low joints, giving bad riding, excessive noise and extra wear and tear to rolling stock are accepted as Sicilian practice. Likewise no attempt is ever made to draw rails so that a uniform expansion joint is obtained, some joints are up tight, others much wider apart than what is required (approx. 3/8 inch per joint ^{the} 1728 local temperature range using a 36 foot rail).

Wish plate bolts were very frequently found to be loose, and the F.W. Gangs not in possession of suitable spanners to tighten same, it was always stated to be at the section chief's house.

Rail fastenings were more than frequently loose and the tracks often not to gauge. Here again it appears never to be the custom to carry around the necessary tools for checking or correcting faults. The gangs have as yet never been equipped with jacks for lifting the track to allow proper packing of sleepers to obtain a good top. A piece of rock and a couple of men straining on a crowbar suffices, for the lifting, hence the quality of the work is adversely affected.

However in spite of these defects no renewal of rails will be required in the next year which cannot be met from the very small rail stocks scattered at various points round the island.

From the lengths inspected it was evident that considerable amount of renewal of sleepers is necessary to obtain a safe fast road. The chief faults are the bad shakes developed causing the fastenings to loose their grip, broken fastenings necessitating the refiring in fresh holes, and fastenings 'sickness', again requiring fresh holes. It must be pointed out that attempts have been constantly made by moving the sleepers at right angles to the rails to obtain sound wood so that the screwed fastenings could obtain a firm grip, but the time has arrived when renewals must be made.

As previously pointed out all maintenance has been done in the past by spot patching methods and therefore any figure obtained from an inspection at widely separated points should give some indication of the total requirements.

It may also be assumed that the uncovered portions are those at which it is anticipated that trouble exists or are those undergoing the normal 4 year examination.

The figures obtained at 20 different sections of line each of 1 kilometre in length naturally varied considerably, from 98 to 300 being recorded. The mean figure was 216 per kilometre.

Basing calculations on the average figure, for the standard gauge lines alone, some 367,200 sleepers would be required thus giving a complete renewal of the system in a period of 4 to 5 years. Such a figure is unreasonable and bearing in mind that sections inspected were undergoing the 4 yearly examination and that the life of a sleeper should be some 16 to 20 years, the renewal figure should be divided by four giving a result of say 90,000 sleepers for a first class fast road.

Such rehabilitation at this stage cannot be entertained and therefore it is suggested that every third defective sleeper be renewed giving for the comparatively light axle loads a road which is serviceable provided a maximum speed restriction is imposed, particularly with regard to the Diesel Rail Cars. A maximum of 60 kilometres per hour is desirable.

If the above suggestion is adopted, the number of sleepers required is therefore reduced to some 30,000 for the next 12 months.

It is therefore recommended that the request made by the Sicilian Division for 18,000 sleepers is a very reasonable

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It is therefore recommended that the request made by the Sicilian Division in their latest estimate dated 1 March, for 18,000 sleepers is a very reasonable demand, and that efforts should be made to obtain the release of the sleepers with a possible further consignment of 12,000 at a later date as and when stocks can be released without prejudice to the operational forces on the mainland.

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EJMK
E. J. MOLE,
Major.

Please proceed with

Enc. *LLA*
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