

Haramain High Speed Ralway Makkah-Madinah Saudi Arabia

## A challenge for Spanish railway industry

○n October 28th 2011, a Consortium consisting of 12 Spanish and 2 Saudi companies, was awarded the Phase 2 of the Haramain High Speed railway line from Makkah to Madinah works for the Saudi Railway Organization (SRO), with a contract amount of 6,700 million $€$. It is the largest international contract in history ever awarded to any Spanish company.

The contract consists in the construction of 449 km of double track, including all associated systems (track, electrification, signalling, telecommunications, etc), the construction of 4 work bases and 2 train depots, the supply of the rolling stock and the operation and maintenance during 12 years.

COPASA is the 3rd company in the Consortium in volume of works, which are mainly the construction of 239 km of double track, including materials manufacture/procurement, the construction of 3 assembly and maintenance bases, and the maintenance of the high speed line for a period of 12 years.

The maximum design speed of the railway line is $320 \mathrm{~km} / \mathrm{h}$, and the peak traffic will be 160,000 passengers/day.


## Facilities on site



SLEEPERS FACTORY
Sleepers type: monoblock prestressed concrete
Daily production: 2,400 pcs


CABLE DUCT FACTORY
Cable duct type: mass concrete
Daily production: $1,600 \mathrm{~m}$


## WELDING PLANT

Stationary flash butt welding plant
Long welded rails (LWR) 300 m length
Daily production: 10 LWR


BALLAST QUARRIES
5 ballast quarries sited all along the alignment
Daily production: 7,500 t

## Haramain High Speed Railway

## Makkah-Madinah



## Budget

Total amount assigned to COPASA works

| Construction (track assembly and others): | 363.60 |
| :--- | :---: |
| Track maintenance (12 years): | 275.50 |
| TOTAL | 639.10 |

in millions of $€$


Works
performed by COPASA

- MATERIALS MANUFACTURE
- TRACK ASSEMBLY
- Ballast
2.40 million tons
- Ballasted track
- Slab track
- Sleepers
- Long welded rail $(300 \mathrm{~m})$ $530,000 \mathrm{~m}$
$860,000 \mathrm{pcs}$- Embedded track in stations $\quad 13 \mathrm{~km}$
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$\begin{array}{ll}\text { - Cable duct assembly } & 47 \mathrm{pcs} \\ & 478 \mathrm{~km}\end{array}$

- OTHER WORKS
- Work and Maintenance Bases 1, 3 and 4

Track maintenance

Once construction works are finished, COPASA will be responsible for the maintenance of the 449 km of double track running between Makkah and Madinah, for a period of 12 years.
The 4 Assembly Bases used during the construction period of the high speed line, will be converted into Maintenance Bases during the operation period.
COPASA is in possession of the latest technology in heavy track machinery for the performance of the track maintenance works and has highly skilled and experienced technicians.


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