



**Haramain High Speed Railway Makkah-Madinah**  
Saudi Arabia

# A challenge for Spanish railway industry

On 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 km/h, and the peak traffic will be 160,000 passengers/day.



## Facilities on site



### SLEEPERS FACTORY

Sleepers type: monoblock prestressed concrete

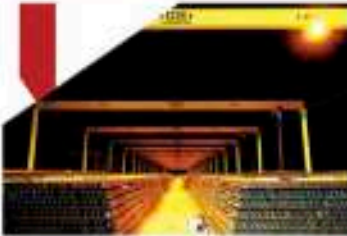
Daily production: 2,400 pcs



### CABLE DUCT FACTORY

Cable duct type: mass concrete

Daily production: 1,600 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



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Budget

Total amount assigned to COPASA works

Construction (track assembly and others):	363.60
Track maintenance (12 years):	275.50
<b>TOTAL</b>	<b>639.10</b>

in millions of €



## Works performed by COPASA

### • MATERIALS MANUFACTURE

o Ballast	2.40 million tons
o Precast concrete cable duct	530,000 m
o Sleepers	860,000 pcs
o Long welded rail (300m)	3,280 pcs

### • OTHER WORKS

- o Work and Maintenance Bases 1, 3 and 4

### • TRACK ASSEMBLY

o Ballasted track	472 km
o Slab track	6 km
o Embedded track in stations	13 km
o Turnouts	97 pcs
o Cable duct assembly	478 km

## 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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