

# **CASE STUDY**

## **Abstract**

Al Haramain High-speed Railway Stations (HHR) is a significantly important project of Saudi Railway Organization (SRO). Most of the total work has been accomplished while the project is still in progress, which is scheduled to be completed by the end of 2015. The stations have aesthetically iconic buildings having the design inspired by Islamic architectural tradition. Trust Pro Contracting was the sub-contractor appointed for the top coat fire protection paint work of Al Madina Station. We accomplished the work as demanded by the SRO contract. We specialize in passive fire protection & fireproofing, which when coupled with highly knowledgeable and skilled workmen delivered exceptional quality work as a result.



### Location

Central Jeddah

Contractor appointed by Saudi Railway Organization for Phase 1, Package 2 stations construction contract

Yapi Merkezi Construction and Industry Inc., a member of Saudi Binladin – Yapi Merkezi Consortium

Sub-contractor appointed by Saudi Railway Organization for the top coat fire protection paint

**Trust Pro Contracting** 



## **Al Haramain High-speed Railway Stations (HHR)**

The Haramain High-speed Railway is a major infrastructure project for the Kingdom of Saudi Arabia. Conceived to be the urgent need of KSA, the project connects the cities of Mecca, Madina, Jeddah and the developing King Abdullah Economic City (KAEC). Altogether, the large, flexible stations are considered the gateways to each city. Each station contains a main building, arrival & departure concourses, a mosque, civil defense fire station, helipad, terminals, short and long term car parking, lounges for VIPs, shops, restaurants and cafes.

The project is one of the largest and most beautifully executed railway stations the world. The concept of the design draws inspiration from the Islamic architecture, while the roof design is based on the traditional gateway arch. It involves climate-controlled concourse spaces providing visitors with respite from the desert climate.

## **The Build-up Area of Stations**

1. Makkah Station - 447,600 sq. m 2. Jeddah Station - 461,000 sq. m 3. KAEC Station - 274,000 sq. m 4. Madinah Station - 172,000 sq. m



## **Overall Objectives of the Project**

- To meet the needs of growing number of pilgrims year after year, the Umrah performers, general visitors, and residents travelling to Mecca and Madina during the seasons, holidays, and throughout the year
- To provide passengers a comfortable and uplifting experience at the two termini and two through stations
- To alleviate the pressure and congestion on the roads between Mecca, Madina and Jeddah Governorate





## The Al Madina Project



## **The Project Requirement**

- Supply and application of the top coat paint at non-fire protection areas at platform and concourse
- Surface preparation
- Necessary cleaning
- Deliver high decorative quality finish
- Application of Intergard 821 putty on the unleveled steel surface
- Supply and application of the Interfine 979 top coat material as a top coat for non-fire protection system areas
- Supply and application of the top coat paint at fire protection areas at platform and concourse
- Repair fire protection paint
- Removal of the fire protection system from the column and column head
- Supply and application of Intergard primer 251
- Supply and application of intumescent coat Interchar 963 for one hour protection
- High durability and anticorrosive coating to maintain long term colour/gloss retention
- Necessary repairs in the top coat as per the requirement

#### **Material Used**

- Intergard 821 putty
- Interfine 979
- Intergard primer 251
- Intumescent coat Interchar 963

## **Execution of the Project**

**Execution of the Project** 

The execution of the project was well planned by our specialist engineers. Considering the given timeline to accomplish the top coat paint, we clearly defined the requirement of workforce, transport, equipment & technology, and flow of work. With state-of-the-art technology and superior workmanship at our end, our team successfully completed the work covering fire protection as well as non-fire protection areas, both platforms and concourses. The design was based on a modular approach as demanded by the contract. It was a challenge to bring efficiency in terms of timely delivery and value, keeping the basic design idea intact. We incorporated modern techniques to attain the desired finish to the top coat that truly reflects the future of leading-edge infrastructure.



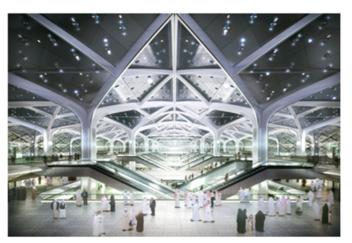


Every visitor to the station can witness the superiority of the top coat at a first glance. The beauty of professional finishing is clearly visible.

## **Challenges Encountered during the Execution of the Project**

- An extremely high level of maintenance was crucial during the construction project
- The time schedule given to use was so demandable that our team had to work non-stop in all seasons. Our team of works labour, specialist engineers and design personnel successfully completed the work under extreme weather conditions, facing a few short term difficulties
- The total area of the top coat that we had to cover was as vast as 70,000m2, which we accomplished only within a year

Trust Pro Contracting takes pride in being a vital part of the construction and completion of the Al Madina Station Project, within the timeline and far beyond expectations.











To know how we can help you with passive fire protection solution, feel free to get in touch with us!

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