

YEARS
AHEAD

permare[®] ep

Sewage Manholes Contract 15A & 16 . Jeddah . Saudi Arabia

Client MINISTRY OF WATER & ELECTRICITY . MAKKAH REGION . SAUDI ARABIA
Main / Authorised Contractor ALI AL-ASWAD EST

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Products in action

The **Permare[®] EP** tanking and lining membrane has been used to provide a durable, waterproof and chemically resistant membrane coating to some 2,000 m² of the internal lining of sewage manholes on a newly built sewer line in Jeddah, Kingdom of Saudi Arabia.

The new pipeline forms an important section of Jeddah's main sewage network, running beneath the Old Airport and the Sulaimania, Quaizah and Naseem Districts in the south of the city.



Clients, the Ministry of Water & Electricity for the Makkah region required specialist protection for the reinforced concrete manholes in order to prevent corrosion and to safeguard against any leakage of the potentially aggressive and harmful sewage into the surrounding land. They were seeking a cost-effective and hardwearing alternative to the traditionally used PVC, GRP and epoxy systems, which are notoriously inflexible, costly and require regular maintenance.

Durable and flexible, **Permare[®] EP** has approval from several of the Country's regional water and sewage authorities. The system also has an extensive track record of successful applications throughout the Kingdom where it has been exposed to and tested by the harsh sewage environment. As such **Permare[®] EP** was seen as the ideal system for this project.

Ease of application

Main Contractors, Jeddah based company Ali Al-Aswad Est, undertook the application of the system using short-fleece rollers and brushes. Whilst both client and applicator were impressed by the system's speed and ease of application, other distinct advantages offered by the system became apparent during application. As a thixotropic, liquid applied and seamless coating, the system was able to easily accommodate the abundance of service inlets/outlets and internal angles encountered, as well as cope with the potentially difficult changes in profile. It also helped to ensure a uniform and monolithic finish throughout the internal surface of each manhole, including the benching, walls, ceiling and neck.



Furthermore, the system's tolerance of high temperatures and humidity ensured that the application process was unaffected despite experiencing temperatures rising above 45°C

As a result of this successful application, **Permare[®] EP** has been used on many similar projects across the country, ensuring that Saudi Arabia's sewage network will benefit from cost-effective and long-lasting protection. ■

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