



EXCAVATION

SCC's CAT 385 is seen on the 'Limassol' excavating trench for the pipeline.

Only a machine of that size could reach the required depth and yet still have enough power to dig out hard formations.

The excavated materials, when suitable would be used to backfill the trenches.



INTERFACE

At the interface of offshore/onshore, it is necessary to shore the trench with sheet piles. The dredging works are carried out by an excavator travelling on top of the sheet piles. Once the trench is dug out to levels, the pipe is floated and sunk in the same manner as offshore.



LAUNCHING PAD

A launching pad was built on the side of the temporary jetty.

It is fitted with rails, rollers, and steel guides to keep the pipe on track and ease the pulling effort.

Lubricants are used on the rails to minimize friction.

LAUNCHING

Once the pipe is seated on the bottom part of concrete collars and the top half is installed and bolted, the length of 250 m is pulled to make it slide on the rails and rollers. The pipe floats before it is sunk and joined to the previous sections. The total weight of one section is almost 750 T.



HAYA SEA OUTFALL PIPES

Haya is the authority in Oman that manages sewage water from collection to treatment to disposal.

They have built one large sewage treatment plant in Darsait and upgraded another one in Athaiba.

SCC formed a joint venture with Tecnicas Reunidas from Spain to lay 1600 mm diameter HDPE pipeline 3 km long into the sea in each location.

These pipes would operate in case of emergency should any breakdown occur in the treatment plants. They would diffuse the foul water into the sea until treatment resumes.

An onshore section is also part of the works before the final connection is made to the treatment plant.

The technique used is to float sections of the pipeline and sink them under the sea.

Several challenges had to be addressed. The pipeline route in Dar Seit goes through a wadi that ends in the sea.

Dewatering was necessary as well as extensive trench shoring.

In the interface section between land and sea, the trench was demarcated and protected with sheet piles.

Special care had to be taken in order not to cause undue inconvenience for the local fishermen.

KUMZAR

SCC's large Kumzar, carrying the 270 T Somitomo crane assisted considerably the operations, whether for lifting or anchoring, pulling or sinking.

Keeping the right inclination on the pipe whilst sinking the pipeline is vital to avoid damage to the joints or to the concrete collars.

