

MASSIVE BAGHDAD SCHEME BRINGS LOGISTICS HEADACHES

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P. 22

A French consortium is working on one of the world's largest water supply schemes in Baghdad. Co-leaders of the group are SOBEA, a subsidiary of Saint-Gobain, and Spie-Capag, a member of the Spie-Batignolles group. Other firms involved are Pont-a-Mousson, also part of the Saint-Gobain group, which is providing the cast-iron pipes, Spie-Batignolles, and Seureca which is responsible for design of the pipeline networks. Work involves reinforcing and improving a drinking water and a raw water network within the capital.

Tenders for the work were published in July 1980 by the Baghdad Water Supply Administration (BWSA). The sheer size of the project ensured the interest of the world's top three producers of ductile iron pipes - Pont-a-Mousson, the US' Pipe & Foundry Company and Japan's Kubota. The negotiating period was described as short but difficult, hampered by the outbreak of war in September 1980. The French bid lower than Kubota, and on 26 November 1980, two contracts - together described by Jean-Louis Beffa, president of Saint Gobain's pipe and machinery division, as the largest ever signed in this sector - were signed with BWSA. The drinking water network contract is worth ID 183 million (\$610.2 million); the raw water network ID 134 million (\$446.8 million). Payment at fixed prices is to be made as the pipes are laid.

The first network is to supply drinking water to areas in inner Karkh and Rasafa. Priority is to be given to completing a network in the central area, bounded by Palestine street in Rasafa and Rabia street in Karkh, in time for the non-aligned conference in September. The overall network will eventually total some 1,200 kilometres. Storage capacity is to be provided by 15 reservoirs under a separate contract.

The raw water network is intended to fulfill the city's needs until 2000, as well as irrigating Baghdad's green belt. Five pumping stations with a total capacity of 45 cubic metres a second are to be built on the banks of the Tigris.

The large scale of the project has involved the consortium in some complex problems, perhaps the greatest headache being the logistics involved. Some 330,000 tonnes of ductile iron pipes - the largest of which are six metres long and 1.6 metres in diameter - have to be transported a total 3,500 kilometres.

Some 100 cargo ships are to be used to carry the larger pipes over the 2,570-kilometre first leg. The smaller pipes, and between 15,000-20,000 tonnes of valves, fittings and accessories, are to be shipped by chartered roll-on, roll-off (ro-ro) vessel. Over the three-year contract period, Iskenderun will be able to handle a maximum 200,000 tonnes. The remainder of the pipes and fittings will be shipped via Antwerp to

Dammam or Aqaba. Spot tonnages will handle 3,400-4,000-tonne loads. At Aqaba, pipe shipments will be given berthing priorities every 60 days.

A Turkish trucking company - Transturk - has been contracted to haul pipes from Iskenderun. It has bought 150 tractors from France's Renault Vehicules Industrielles (RVI) and 100 Freuhauf trailers; these two firms have a \$15 million contract to set up and staff a maintenance and repair depot at the port. The trucks are expected to make some 30,000 trips over the three years with one lorry arriving every 45 minutes in Baghdad.

Once the pipes have arrived in Baghdad, they will be stored in three stockpiles in the capital. The contractors are faced by a total 1,200 kilometres of medium and large pipes and some 3,000 kilometres of small pipes. The installation schedule involves laying pipes at a rate of more than 100 kilometres a month.

Assisting BWSA in design review and construction supervision is the UK's Binnie & Partners, which is also responsible for planning and designing the Karkh water supply scheme. In turn, Binnie is being helped by the UK's Metal & Pipeline Endurance (MAPEL) in technical and commercial quality control programmes.

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