SHAW CONTROLS SUPPLIES AND INSTALLS LOW VOLTAGE DISTRIBUTION BOARDS AT THE PORT OF NGQURA EXPANSION

Shaw Controls has successfully fulfilled its contract for the manufacture, supply and installation of the main low voltage distribution boards for substations at the Port of Ngqura Container Terminal Area. The main low voltage distribution boards, supplied for the four container terminal distribution substations, provide power to the refrigerated container component at the Port of Ngqura Expansion Project. The four container terminal sub stations, each equipped with two main distribution boards with a rating of 4000 Amps at 400 Volts (design fault level of 70kA), were manufactured by Shaw Controls at its Johannesburg facility.

Shaw Controls was also responsible for the supply and installation of encapsulated busbar trunking for the substations. The manufacture of the busbar trunking was subcontracted out to Busbar Installation as this is not part of Shaw Controls' core competency', and the company oversaw the installation of a total of 45 linear metres of busbar trunking for each of the substations. The busbar trunking was installed between

the respective supply transformers to each of the main distribution boards with a shared trunking between the main boards and the standby generator set.

Bevan Richards, managing director of Shaw Controls, says that in addition to the main distribution boards, the company was responsible for the manufacture and supply of a total of 118 distribution boards for the refrigerated container storage area on the new quay extension at the port.

"Although the manufacture and supply of this electrical equipment was relatively standard, the challenge was to meet the delivery programme because of the volumes involved," Richards says. "Careful planning of our own procurement and manufacturing programme was essential to ensure that our deliveries dovetailed with the construction programme." The order was split into four batches which allowed the first 30 units to be completed and shipped to site, followed by the balance as separate shipments as per the Activity Schedule. These 118 distribution boards were installed on site by the HMG-JV electrical subcontractor.

Apart from the challenge of completing manufacture of all equipment within the delivery programme, Shaw Controls also had to install the distribution boards at the

container terminal substations. The installation was completed in an average time of three weeks per substation. Richards says that Shaw Controls oversaw the installation of the main boards by Busbar Installations and completed the cold commissioning test itself to be able to control the scheduling and the quality of workmanship as the programme which did not allow for much flexibility in the event of unforeseen site issues occurring.

The main distribution boards at other substations which formed part of HMG-JV scope works were installed and commission tested by Shaw Controls, however the "small power" emergency distribution boards required were only supplied by the company and installed by others.

Shaw Controls also manufactured and supplied switch socket outlet kiosks to facilitate tug boat connection during mooring at the quay wall. A total of four were supplied.

The completion date for the whole of the works was mid December 2009.

Richards says that a major advantage is that Shaw Controls is CIDB accredited "This underpins our commitment to aspects such as BBBEE, quality and general integrity of

the business, and it gives our customers additional assurance when awarding contracts to us."

Shaw Controls implemented an extensive expansion at its facility during the first quarter of 2009 and Richards says this went a long way to ensuring capacities enabling the company to meet this contract's delivery schedule.

As part of this facility expansion, restructuring was done and a design and engineering team was established at Shaw Controls which has allowed the optimisation of all work taking practical aspects of individual projects into account. The company operates an in-house design facility which allows better control of project timelines and scheduling, and the team is backed by individuals with years of experience and expertise.

"By having a team committed to project management we are able to ensure a significantly enhanced level of service to customers," Richards concludes.