

WEG MOTORS/DRIVES & DOL CONTROL PACKAGES POWER HEAVY OIL RECOVERY PROCESS IN 500C HEAT & SAND STORMS OF OMANI DESERT.

WEG motor control packages, comprising low maintenance motors, ruggedised CFW-09 inverter drives and direct-on-line (DOL) starting controls, are helping EN-FAB, Inc., of Houston in Texas, to achieve demanding production targets in a major steam injection recovery project undertaken to help Petroleum Development Oman (PDO) reverse Oman's declining oil production.

"WEG is the only motor and drive equipment that we would trust in the harsh Omani environment," said Chandra S. Tripathy, President of N-FAB, Inc. "WEG is one of our major vendors because we have had a good working history with them on other steam generation projects throughout the world, Their commitment to us is evident throughout all aspects of their equipment production - from engineering design, to on-time deliveries, to post-sale support of their installed products."

Steam injection technology; a process in which heavy viscous oil is thermally stimulated to improve recovery, is the ideal technology for use in Oman. Ideal, because Oman's more readily accessible reserves are somewhat depleted, limiting future production to the heavy oil formations in the hot, arid regions of the country's interior. With depletion of global oil resources now a common problem, injection technology is increasing in use, as evidenced by successful projects in the Middle East, North America, China, Russia and South America.

EN-FAB, Inc has considerable expertise in steam recovery in projects all over the world. This expertise was pivotal in EN-FAB, Inc. being contracted by PDO to design and install 100-million-BTU steam generators in the Omani oil field, which, incidentally, is situated on a vast gravel desert plain, and subject to regular sand storms and some of the world's highest recorded temperatures.

To date, WEG has delivered 34 motor control systems to EN-FAB to control multiple motors on the oilfield. Each system comprises WEG's CFW-09 Series variable frequency (VF) drives and customised control packages with direct on line (DOL) starting. This equipment helps run the main and booster pumps that supply water to the steam generators, as well as the large fans for combustion air to the burner assembly. The success of the WEG motor control systems is evidenced by EN-FAB requesting other equipment vendors to supply two- and four-pole WEG motors on their equipment to complement the use of the WEG VF drives and controls.

"It's the ruggedness and the ability to operate at differing voltages and frequencies that has ensured the specification of WEG products for this project." said Michael Smith, WEG's Automation Sales Engineer. "The location of the field presents unrelenting challenges for motors and drives, and the equipment they power."

"In Oman, ambient desert temperatures can regularly exceed 500C in the hot season; and sand storms are prevalent," said Smith; "so it's critical to have "rugged, low-maintenance motors, variable frequency drives, and control packages capable of reliable and repeatable performance. For example, The WEG CFW-09 series of VF drives features Vectrue Technology™ and is among the World's most advanced technologically for use with three-phase AC induction motors. The series provides users with the benefits of software selectable V/F, sensorless vector, and closed loop vector (with encoder) control techniques in one product."

WEG's involvement in large recovery projects, such as the one in Oman, is helping to change outside perception of the company – from that of solus manufacturer of electric motors, to that of a global provider and supplier of complete automation solutions.

"We are in this project for the long term," said Smith. "At the beginning of 2008, the oil field had reached a target of 32,000 barrels of oil, with only six steam generators on line. However, because there is a direct correlation between the amount of steam injected into the formation and the amount of oil recovered, production should increase proportionally as EN-FAB brings additional steam generators on line."

"In the meantime, WEG will continue its commitment to provide rugged motor, drive, and control solutions, as well as the personnel and field support to ensure that the Omani field continues to achieve its production goals."
