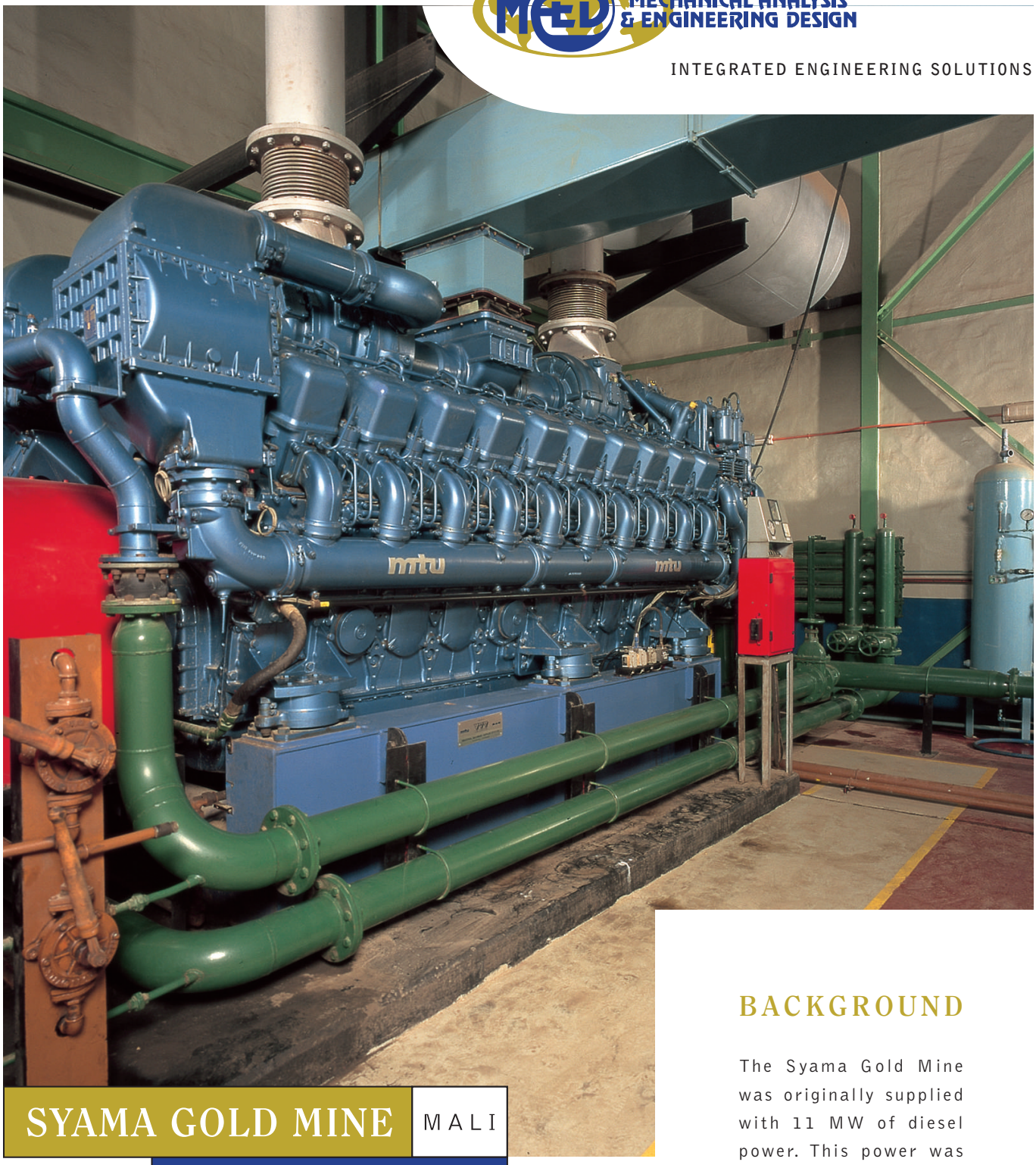
MECHANICAL ANALYSIS & ENGINEERING DESIGN

INTEGRATED ENGINEERING SOLUTIONS



SYAMA GOLD MINE

MALI

POWER GENERATION

BACKGROUND

The Syama Gold Mine was originally supplied with 11 MW of diesel power. This power was generated by way of fifteen Caterpillar portable, container-mounted generator sets. These units had been in operation for eight years, but had proven to be too expensive to maintain and had come to the end of their useful life.

SCOPE OF WORK

The new process plant expansion undertaken by MAED, required a power supply of at least 21 MW to be available, at any time, with a peak of 23 MW during startup. New equipment that was due for installation, required 6600 volts and 550 volts, while the existing plant was running at 3300 Volts and 380 Volts.

A new power station for the mine, was therefore required. MAED utilised its superior engineering design and construction capabilities in the design and building of a suitable power station, which included a new reticulation system.

SYAMA GOLD MINE

MALI

POWER GENERATION

GENERATOR SETS

MAED procured and installed 10 Fairbanks Morse 1.8 MW reconditioned generator sets, together with two MTU 4.1 MW sets. The resulting power supply of 26.2 MW became available.

The generator sets were installed in a purpose-built power generation building complete with GEC switchgear and external radiator type cooling systems. The building incorporates two overhead cranes and a purpose-built maintenance bay.

A diesel storage and feed system was installed.

STATE-OF-THE-ART

The control and synchronisation system at the Syama gold mine is all state-of-the-art PLC controlled.

TIMEOUS COMPLETION

The first phase of the project was completed in seven months at a cost of $ 3.9 million US. Phase II has been undertaken and the final cost upon completion in September 1998 is $11 million US.