SPOTLIGHT

on quality assurance in the metals industry

by A.V.S. MEYER*

The Colloquium held at Iscor, Pretoria, on 28th June, 1988, had as its objective the need for Quality Management Systems in the industry. Case studies of how problems were identified and solved by the use of such systems were submitted.

Proceedings

The proceedings opened with an excellent exposition by Mr R.H. Ford of the South African Bureau of Standards on Quality Assurance. Managing for quality, it was pointed out, would require a major change in traditional thinking. The key problems were *Prevention* and *Evidence*: knowing where the quality problems lay and the magnitude of those problems.

The case study from Middelburg Steel & Alloys described how the Quality Management System had highlighted a problem involving a surface defect on 316 type stainless steel and had then provided the tools for its solution.

Mr N.G. Hatton of Lew presented a case study showing how a historical record of poor performance, lack of systems, and low morale in the work force was turned round by a new Quality Management approach, worker involvement, liaison, training improvements, and the overall introduction of sound quality-assurance principles.

Stringent requirements, particularly with regard to weldability, are called for in the development of steels for offshore structures. Mr T.A. van Niekerk of Iscor described the detailed work and exacting testing programmes that were evolved for the use of BS 4360 GR50E steel. Quality standards were set, ensuring the integrity of these steels when in service, and confidence in them.

Statistical Quality Control (SQC) was the subject of the case study presented by Mr F.B. Buys of ASTAS. Control charts had been used to monitor process performance, and costing data had been analysed by the Pareto technique, allowing for the most serious problems to be tackled immediately. The beneficial results were obvious in the trends shown for the years 1983 to 1987.

Perhaps more demanding than the standards of offshore steels are those required by the aerospace industry. Mr A. Wallace of Atlas discussed the intricate requirements for the manufacture of jet-engine blades. The need for all involved, from management to the machine operator, to understand and accept the Quality philosophy was highlighted. All were responsible and accountable for the quality of the final product.

Conclusion

As customer expectation becomes more sophisticated and competition increases, the need for establishing Quality Management Systems is becoming more acute. That these are management-driven and need training at all levels were stressed. The case studies presented at the Colloquium showed clearly that, once such systems have been installed, they are capable of solving many quality problems.

* Head of Quality Assurance, Middelburg Steel & Alloys (Pty) Ltd, P.O. Box 133, Middelburg, Transvaal 1050.

Autogenous and semi-autogenous grinding

An international conference on autogenous and semi-autogenous grinding will be held in Vancouver, British Columbia from 25th to 27th September, 1989. This three-day conference will bring together all those engaged in the field of autogenous and semi-autogenous grinding related to the industrial-mineral and metalliferous-mineral industry. Conference topics will include

- Metallurgical Testwork
- SAG Mill Scale Up
- SAG versus Conventional Circuit Costs—Comparisons, Operational Practices, Circuit Design, and Installation Practice
- Modern SAG Mill Design Concepts
- SAG Mill/SAG Circuit Control.

Round-table discussions will permit interaction between registrants and experts in areas such as scale up, design, and control.

Sponsors of the conference are the Mineral Industry Technology Council of Canada (MITEC), Canadian Mineral Processors (CMP), Canadian Institute of Mining and Metallurgy (CIM), Canada Centre for Minerals and Energy Technology (CANMET), University of British Columbia (UBC), and Unité de Rechereche and Mineralurgie (CRM, GRAIIM).

Enquiries should be directed to

Professor A.L. Mular
Department of Mining and Mineral Process Engineering
University of British Columbia
6350 Stores Road
Vancouver, BC
Canada V6T 1W5.
Telephone: (604) 228-3983
Facsimile: (604) 228-5599.