鉄 と 鋼 第 76 年 第 2 号 （2 月号）目 次　　　次号目次案内

ISIJ International, Vol. 30 (1990), No. 2 (February) 掲載記事概要

Special Issue on Artificial Intelligence in Iron and Steel Production

Artificial Intelligence in Materials Processing Operations : A Review and Future Directions (Review)

By *Stavros A.* ARGYROPOULOS

The evolution of artificial intelligence (AI) from its early days to the present is reviewed. The various concepts currently utilised are defined. The strides that have been made in recent years in applying expert systems to numerous engineering problems, and most notably in the area of materials processing operations, are reviewed. The rate of new applications of artificial intelligence to engineering problems is constantly increasing, as it becomes more feasible to build on earlier theoretical research. Ultimately, we can expect that artificial intelligence will be applied in all areas of human endeavour, as its benefits in terms of cost/effectiveness become more apparent. For the near future, however, one's expectations need to be more circumspect. Areas in materials processing operations that are most promimsing for expansion into AI in the near future are considered.

Expert System Building Tools

Rapid Prototyping Tools for Real-time Expert Systems in the Steel Industry

By *L. G.* LOCK LEE *et al.*

The application of artificial intelligence (AI) and expert systems techniques to process management tasks within the iron and steel industry is now gaining wide acceptance. This paper describes the development and application of software tools which have been successful in significantly reducing the time required to produce real-time expert system prototypes.

BHP's SHERPA (System for HEuristic Real-time Process Assistance) is a facility which integrates modules for knowledge base development, signal processing, operator displays, on-line numerical models and data