

	Keizi Ohsaki, <i>et al.</i>	S1389
740	Mechanical properties of Fe-36%Ni alloy. (Development of Fe-36%Ni alloy for LNG storage tank—II). Kouji Mukai, <i>et al.</i>	S1390
741	Rust preventive surface treatments and their weldability for Fe-36%Ni alloy. (Development of Fe-36%Ni alloy for L.N.G. storage tank—III). Takenori Deguchi, <i>et al.</i>	S1391

Symposia*

— IRONMAKING —

November 1, 1981 13:30~17:20

Chairman: Yuji Togino

Theme I. Blast Furnace Instrumentation Technology and Process Control Technology—Recent Situation and Future Outlook

1	Present situation and future outlook of blast furnace instrument and control technology. Teiji Shibutani.....	A109
2	Identification of materials and measurement of oxygen partial pressure in experimental blast furnace by means of optical method and oxygen sensor. Yoshikazu Kuwano, <i>et al.</i>	A113
3	Measuring of burden and gas distribution in blast furnace shaft. Hideo Kanoshima, <i>et al.</i>	A117
4	Gas distribution control sensors and information processing for blast furnace operation. Tadaaki Iwamura, <i>et al.</i>	A121
5	Development of instrumentation technology for blast furnace process control. Yoshiyuki Matoba, <i>et al.</i>	A125
6	Development of diagnostic techniques for lining erosion of blast furnace. Yoshio Kawate, <i>et al.</i>	A129

— STEELMAKING —

November 1, 1981 13:30~17:20

Chairman: Yoshio Miyashita; Vice-chairman: Tetsuro Ohashi

Theme II. The Behavior of Oxide Inclusions in Continuous Casting

7	On the producing method of clean steel slabs in continuous casting. Yutaka Yoshii, <i>et al.</i>	A133
8	Countermeasures for reducing large inclusions in continuously cast slabs. Minoru Yamamura, <i>et al.</i> ...	A137
9	Mechanism of formation of non-metallic inclusions and countermeasures in continuously cast slabs. Tadao Watanabe, <i>et al.</i>	A141
10	The behavior of non-metallic inclusions in the continuously cast blooms. Isamu Wakasugi, <i>et al.</i>	A145
11	Composition and configuration of inclusions in continuously cast slabs accompanied with slightly deoxidizing. Eiichi Takeuchi, <i>et al.</i>	A149

— PLASTIC WORKING AND OTHER FABRICATION PROCESSES —

November 2, 1981 13:30~17:20

Chairman: Tadaaki Yanagisawa

Theme III. Application of Continuously Cast Steel for Heavy Gauge Shapes

12	Application of flange spreading method to CC beam blank. Kiyotaka Morioka, <i>et al.</i>	A153
13	Rolling of large wide flange beams from continuously cast slabs. Chihiro Hayashi, <i>et al.</i>	A157
14	Technique for rolling heavy gauge shapes from continuously cast steel. Masashi Yamashita, <i>et al.</i>	A161
15	Rolling method of universal channel from continuously cast slab. Hiroshi Bōda, <i>et al.</i>	A165

— PROPERTIES OF IRON AND STEEL —

November 2, 1981 13:30~17:20

Chairman: Tadahisa Nakamura; Vice-chairman: Shigetomo Nunomura

Theme IV: Fracture Toughness in Low Strength and High Ductility Steels

16	Current status of the measurement of fracture toughness in high ductility steels. Shigetomo Nunomura, <i>et al.</i>	A169
17	Measurements of J_{IC} and $J-R$ curve in reactor pressure vessel steels by the electrical potential method and the application of this method to the evaluation of neutron irradiation embrittlement. Tsuneo Kodaira, <i>et al.</i>	A173

* The preprints of symposia were published in *Tetsu-to-Hagané* (Journal of The Iron and Steel Institute of Japan), 67 (1981), No. 9, A109 to A219, in Japanese.

- 18 Some problems in J_{IC} measurement using the electric potential and R curve methods.
Yakichi Higo, *et al.* A177
- 19 The role of AE in fracture toughness test of ductile structural materials.
Kazuhiko Kuribayashi, *et al.* A181
- 20 The evaluation of fracture toughness in nuclear pressure vessel steel weldments.
Yasuhiko Tanaka, *et al.* A185
- 21 The evaluation of J_{IC} values in structural low alloy steels and 9%Ni steel. Toshiya Akiyama, *et al.* A189
- 22 Elastic-plastic fracture toughness of high toughness steels. Yoshifumi Nakano, *et al.* A193
- 23 The application of negative pressure-fracture strain diagrams to the evaluation of fracture toughness in low strength-high toughness steels. Sakae Saito, *et al.* A197

November 1, 1981 13:30~17:20

Chairman: Masao Kanao

Theme V. High-temperature, Low-cycle Fatigue Properties of Steels

- 24 $\alpha \rightarrow \sigma + \gamma$ transformation behavior during cyclic deformation at elevated temperatures in two phase stainless steel. Kameaki Tsuzaki, *et al.* A200
- 25 Effects of temperature and strain rate on low-cycle fatigue properties of carbon steel and chromium-molybdenum alloy steel plates. Kenji Kanazawa, *et al.* A204
- 26 Prediction of low cycle fatigue life of low alloy steels at elevated temperature. Asao Narumoto, *et al.* ... A208
- 27 Evaluation of high-temperature fatigue properties of materials by strain range partitioning method. Katsuyuki Tokimasa, *et al.* A212
- 28 Crack propagation in high-temperature low-cycle fatigue of steels. Ryuichi Ohtani. A216