

SCIENTIFIC-TECHNICAL SEMINAR ON NEW
DEVELOPMENTS IN METAL SCIENCE
AND HEAT TREATMENT

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A seminar on new developments in metal science and heat treatment, sponsored by the Chelyabinsk Regional Office of the Scientific-Technical Society of the Machine Construction Industry (NTO Mashprom) and the Chelyabinsk House of Scientific-Technical Propaganda, was held April 15-16, 1976, in Chelyabinsk.

The seminar was attended by representatives of 56 organizations and 26 scientific-research and educational institutes from 43 cities in the Soviet Union.

Thirty-two papers were presented at the plenary and section meetings.

A review by V. D. Sadovskii concerned several problems of the theory of heat treatment. Other reviews concerned new developments in stainless steels (F. N. Tavadze) and spring materials (S. V. Grachev), means of improving the workability of structural steels (Ya. E. Gol'dshtein), problems of phase and structural recrystallization (V. M. Schastlivtsev), and the kinetics of the failure of iron and its alloys (E. I. Kurov).

Special attention was given to problems of alloying and improving the heat treatment of stainless and heat-resistant steels and alloys. New corrosion-resistant steels with high strength and good workability were discussed by A. I. Piskunova, A. Ya. Zaslavskii, G. A. Chadov, Yu. B. Zaslavskii, and S. I. Birman. G. E. Zvigin-tseva discussed iron-manganese based high-strength alloy.

The report by Yu. P. Bulanov concerned the effect of heat treatment on the properties of heat-resistant austenitic steels. V. T. Neumerzhitskii and K. K. Burnakov discussed means of preventing differences in grain sizes of heat-resistant alloys and methods of improving the plasticity. The report by T. G. Berezina concerned processes of failure in heat-resistant steels during creep.

The theory of phase transformations that occur during heat treatment of structural steels was discussed in reports by V. I. Movchan, V. V. Kubachek, and É. I. Mirovskii. The improvement of heat treatment and chemicothermal treatment of these steels was discussed by A. V. Saburov and G. A. Zelenina.

Of particular interest was a report by M. S. Shtremt concerning the use of foams for quenching metal parts.

Several methods of improving the wear resistance of steels were discussed in papers by M. A. Filippov and L. T. Filippova.

Several reports concerned the development of complex methods of hardening steels and alloys. M. A. Smirnov and V. I. Dobrolyubov discussed the effect of high-temperature thermomechanical treatment on the properties of structural alloy steels and aluminum alloys. G. M. Novitskaya discussed the effect of mechanico-thermal treatment on the heat resistance of pearlitic heat-resistant steel. The reports by Yu. N. Goikhen-berg, V. V. Sagaradze, M. A. Filippov, and V. I. Konop concerned hardening of austenitic steels.

ERRATA

The caption of Fig. 1 (p. 164) in issue No. 2 (1976) and the caption of Fig. 2 (p. 165) should read after the work steels: 20 (a), 40 Kh (b), 35 (c), and 60S2 (d).

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