## MATERIALS

HS 84 MANUAL ON SHOT PEENING - SAE J808a - Inteded as a practical aid to engineers, designers, and men in the shop, HS 84 points out some of the possibilities and some of the limitations of the process. Chapters are devoted to a description of the process, the effect of shot peening, shot peening machines, peening media, quality control, fatigue properties, and X-ray diffraction.
2.00 Mem. 4.00 List

J965 ABRASIVE WEAR—SAE Information Report. Covers fundamentals of abrasive wear phenomena, testing for abrasive wear resistance, and solutions to abrasive wear problems.
1.00 Mem. 2.00 List

J936 METHODS OF RESIDUAL STRESS MEASUREMENT. SAE Information Report. Emphasizing mechanical methods of residual stress measurement, this report will help engineers select appropriate measurement techniques. Selected methods are described, classified, and compared. Layer removal, sectioning, hole drilling, slitting, and other qualitative methods are covered along with measurement of Hertzian hardness and analysis.
3.00 Mem. 4.00 List

J447a PREVENTION OF CORROSION OF METALS - SAE Information Report. A guide to principles of metal corrosion and methods of dealing with its prevention. Materials are described and evaluated. Chemical treatments are covered along with coatings of metal, paints, and ceramics.
1.25 Mem. 2.00 List

HS 145 CLASSIFICATION OF MAJOR VISIBLE IMPERFECTIONS IN SHEET STEEL-SAE J810 - Contains illustrations and definitions of major surface imperfections that sometimes occur in sheet steel.
2.00 Mem. 4.00 List

HS 3 SURFACE ROLLING AND OTHER METHODS FOR MECHANICAL PRESTRESSING OF METALS-SAE J811 - Covered are applications of mechanical prestressing, theory of surface rolling for fatigue improvement, calculations for the surface rolling process, tooling for surface rolling, control and inspection, and the effect of surface rolling on properties other than fatigue.
2.00 Mem. 4.00 List

HS 169 LOW TEMPERATURE PROPERTIES OF FERROUS MATERIALS-SAW J794 - Covers factors affecting ductility of ferrous materials. Methods of evaluation are discussed and related to service problems. The significance of composition, microstructure and welding are brought out for different production methods such as casting, rolling, and forging.
1.00 Mem. 2.00 List

HS 124 SAE MANUAL ON BLAST CLEANING-SAE J792 - Instructs engineers, designers, and shop men in blast cleaning know-how. Discusses blasting abrasives, blast cleaning machines, production procedures, and process specifications.
2.50 Mem. 5.00 List

HS 147 EVALUATION OF METHODS FOR MEASUREMENT OF RESIDUAL STRESS-SAE J793 - The residual stress distribution obtained from measurements of six standard specimens by 20 different research laboratories using five different methods of analysis are compared.
2.50 Mem. 5.00 List

HS 182 MEASUREMENT OF STRESS BY X-RAY-SAE J784 - Considered from both technical and practical points of view. Techniques are presented which enable satisfactory measurements of stress even when diffraction lines are diffused. Techniques are based on two-exposure method and use of diffractometers.
1.00 Mem. 2.00 List

HS 198 INFLUENCE OF RESIDUAL STRESS ON FATIQUE OF STEEL-SAE J783-Summarized results of cooperative research program on cold-drawn steel bars, strain-peened flat leaf springs, residual stresses induced by subcritical quench, steel strips plastically deformed, relaxation of residual stresses due to fatigue loading, and varying residual stress bars. (1961)
1.00 Mem. 2.00 List

HS 190 REINFORCED PLASTICS FOR GROUND VEHICLE APPLICATIONS-SAE J762 - This Information Report established an engineering approach to selection and use of reinforced plastic materials. Also acquaints engineers with varied classes of fibrous reinforced plastic materials available and their general range of properties and applications.
.75 Mem. 1.50 List

HS 191 AUTOMOBILE PAINTING PRACTICES-SAE J761 - SAE Information Report covering surface coatings in the automotive industry. Included for discussion are cleaning (emulsion, alkaline, acid, vapor, solvent, mechanical, pickling, flame, and steam); chemical treatment of surfaces; primers; and color coating.
1.00 Mem. 2.00 List

HS 22 REPAIR OF FERROUS CASTINGS-SAE J804 - Shop procedure for repairing apparent imperfections in new automotive gray iron castings, malleable iron castings, and local steel castings.
1.00 Mem. 2.00 List

## PARTS AND COMPONENTS

HS 6 RIDE AND VIBRATION DATA MANUAL. SAE Information Report. Provides a graphical presentation of damped vibrating system characteristics aimed at applications to vehicle ride and vibration problems. Basic relationships, vibration systems, energy absorption and impact, and vibration limits for passenger comfort are covered.
2.00 Mem. 4.00 List

J670a VEHICLE DYNAMICS TERMINOLOGY. SAE Recommended Practice. Defines mechanical vibration - qualitative terminology, vibrating systems, components and characteristics of suspension systems, vibrations of vehicle suspension systems, suspension geometry, tires and wheels, and directional control. Of related interest is SP 275, The Variable-Stability Automobile.
1.25 Mem. 2.00 List

HS 49 SPEEDOMETERS, ODOMETERS, AND TACHOMETERS - Contains SAE Information Report, Factors Affecting Odometer-Speedometer Accuracy - J862, and SAE Recommended Practice, Speedometers and Tachometers - J678a.
1.00 Mem. 2.00 List

HS 34 LIGHTING EQUIPMENT AND PHOTOMETRIC TESTS - 1968 Edition - Contains lighting standards and recommended practices appearing in the 1968 SAE Handbook. Designers and manufacturers of this type of equipment will find HS 34 of interest.
2.00 Mem. 4.00 List

HS 150 TUBE, PIPE, HOSE, AND LUBRICATION FITTINGS - Reprint of all reports appearing in the tubing and fitting section of the 1968 SAE Handbook. Fittings tubing, connections, hoses, "O" rings, plugs and flanges are among the subjects covered. In addition, it includes a recommended coding system for the identification of these products.
2.50 Mem. 4.00 List

HS 9 MANUAL ON DESIGN AND APPLICATION OF HELICAL AND SPIRAL SPRINGS-SAE J795 - A concise and simple account of essentials involved in the design and application of helical and spiral springs to help the engineer and designer as a means to better appreciate the nature of spring problems and to supply them with a ready reference and guide.
4.00 Mem. 8.00 List

HS 26 MANUAL ON DESIGN AND MANUFACTURE OF TORSION BAR SPRINGS-SAE J796 - Presents information pertinent to high efficiency springs as used on suspensions of automotive vehicles. Covers many types of torsion bar springs for a wide variety of uses. (1966)
2.00 Mem. 4.00 List

*New



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