

CONTENTS

| | |
|--------------------------|------|
| Preface | vii |
| From Publisher | viii |

SECTION A — SPECIAL PROBLEMS

| | |
|---|-----|
| A. BUCH, Correlation between Fatigue Limit and Ultimate Tensile Strength | 3 |
| S. V. SERENSEN, Fatigue Damage Accumulation and Safety Factors under Random Variable Loading | 33 |
| M. HEMPEL, Dauerfestigkeitsprüfung von Stählen bei erhöhten Temperaturen | 45 |
| —, Investigation of the Fatigue Strength at Elevated Temperatures (Summary) | 76 |
| G. V. UZHIK, Brittle Fracture of Plastic Metals at Cyclic Overloads | 79 |
| I. V. KUDRYAVTSEV, Causes of Decrease of Tensile Strength of Steel in Zones of Fixed Joints | 87 |
| S. KOCAŃDA, On Microstructure of the Fatigue Fracture of the Machine Elements out of Construction Carbon Steel | 101 |
| J. HOLDEN, Growth of Fatigue Cracks in Aluminium and Mild Steel | 113 |
| A. BUCH, The Influence of Fatigue on the Tensile Strength, Elongation, Electric Resistance and Microhardness of Steel | 129 |
| M. ZAKRZEWSKI, On the Fatigue Decohesion (Summary) | 155 |

SECTION B — MATERIALS AND TECHNOLOGICAL PROBLEMS

| | |
|---|-----|
| J. CHODOROWSKI and A. BUCH, The Influence of Non-metallic Inclusion Lines on the Fatigue Properties of Steels | 161 |
| V. T. TROSHCHENKO and B. A. GRYAZNOV, Some Problems of Fatigue Strength of Sintered Cermetallic Materials | 189 |
| V. LINHART, Der Einfluss einiger Oberflächenbehandlungen und Eigenspannungen auf die Ermüdungsfestigkeit | 199 |
| —, Effect of Surface Treatment and Internal Stresses on the Fatigue Strength (Summary) | 221 |
| S. KOCAŃDA, Die Dauerfestigkeit der mit Kathoden-Wasserstoff eingesättigten Proben aus Konstruktions-Kohlenstoffstahl | 223 |
| —, Fatigue Strength of Elements Made of a Constructional Carbon Steel Saturated with Cathode Hydrogen (Summary) | 230 |
| H. TAUSCHER, Dauerfestigkeit von Stahl nach galvanischer Behandlung | 231 |
| —, Influence of Electrolytic Deposition on the Fatigue Strength of Steels (Summary) | 254 |
| J. WELLER, Beitrag zu vergleichenden Betrachtungen der dynamischen Festigkeitseigenschaften von Proben aus AlZnMgCu und AlCuMg | 257 |
| —, Comparison of the Fatigue Strength of Semi-finished Products of AlZnMgCu and AlCuMg Alloys (Summary) | 264 |
| Z. PAŁĘWSKI and M. RYBAK, Fatigue Properties of PA-4 Aluminium Alloy (Summary) | 267 |
| B. BARANOWSKI, Effect of Low-temperature Annealing on the Fatigue Strength of D60A Ropewires (Summary) | 269 |
| Z. DYŁĄG and Z. ORŁOŚ, An Examination of Preliminary Deformations Influence on Fatigue Strength of Some Low-carbon Steels (Summary) | 271 |

| | |
|---|-----|
| L. JAMROZ, Scatter of Fatigue Investigation Results of Cast Iron (Summary) | 273 |
| S. PRZEGALIŃSKI, R. BĄK and J. WOJNAROWSKI, The Influence of Nickel on the Fatigue Resistance of Construction Steels | 275 |

SECTION C — CONSTRUCTIONAL PROBLEMS

| | |
|---|-----|
| Z. ŁAPIŃSKI, Measurement and Calculation of Fatigue Stresses in Jet-propulsion Engine Blades in Cases of Resonance Vibration (Summary) | 285 |
| T. ROBAKOWSKI, Fatigue Tests of Joints and Welded Elements Performed at the Institute of Welding (Summary) | 291 |
| Z. K. LEŚNIAK, Fatigue Strength of Welded Structural Joints (Summary) | 295 |
| V. GREGOR, Gestaltfestigkeit stumpfgeschweisster Kurbelwellen bei Torsions- beanspruchung | 299 |
| —, Fatigue Strength of Welded Crankshafts Subjected to Torsional Loading (Summary) | 307 |
| E. KAMIŃSKI and S. ZIEMBA, On the Fatigue Strength of Brass Vibrating Plates of Alarm Sirenes (Summary) | 309 |
| Z. PAWŁOWSKI and L. SIEKLICKI, The Dynamic Graduation of 50 T-Schopper's Pulsator (Summary) | 315 |