1. Record Nr. UNINA9910735387603321 Autore Singh Jung Bahadur Titolo Alloy 625: Microstructure, Properties and Performance / / by Jung Bahadur Singh Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2022 Pubbl/distr/stampa **ISBN** 9789811915628 9789811915611 Edizione [1st ed. 2022.] Descrizione fisica 1 online resource (369 pages) Collana Materials Horizons: From Nature to Nanomaterials, , 2524-5392 Disciplina 669.734 Soggetti Metals **Building materials** Metals and Alloys Structural Materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction – Historical perspective -- Phases in Alloy 625 --Microstructure of Alloy 625 -- Mechanical Behaviour of Alloy 625 --Tensile, Creep, Fatigue -- Fracture Behaviour of Alloy 625 -- Corrosion Behaviour of Alloy 625 -- Welding Behaviour of the alloy -- Industrial Performance of Alloy 625 -- References -- Appendix. Sommario/riassunto This book gives a brief history of the development of Alloy 625 and a detailed account of its physical, mechanical, and corrosion properties. It also addresses different types of microstructural changes the Alloy 625 undergoes at intermediate temperatures; provides details of

detailed account of its physical, mechanical, and corrosion properties. It also addresses different types of microstructural changes the Alloy 625 undergoes at intermediate temperatures; provides details of properties deterioration due to such microstructural changes; assesses the alloy damage during the in-service inspection of plants; and provides criteria for the damage evaluation for various destructive and non-destructive testing. It combines the industrial data and literature together in one place for damage assessment of service exposed Alloy 625 components. This book serves as a guide to practicing engineers in the industry interested in the use of Alloy 625 and in academia for students pursuing advanced courses in materials science. Alloy 625 is a versatile nickel-chromium-molybdenum alloy known for its unique combination of high strength, excellent fabricability and weldability,

and outstanding corrosion resistance.