

Abstract: The term of high entropy alloys started from the analysis of multicomponent alloys, which were produced at an experimental level since 1995 by developing a new concept related to the development of metallic materials. Recent developments in the field of high-entropy alloys have revealed that they have versatile properties like: ductility, toughness, hardness and corrosion resistance [1]. Up until now, it has been demonstrated that the explored this alloys are feasible to be synthesized, processed and analyzed contrary to the misunderstanding based on traditional experiences. Moreover, there are many opportunities in this field for academic studies and industrial applications [1, 2]. As the combinations of composition and process for producing high entropy alloys are numerous and each high entropy alloy has its own microstructure and properties to be identified and understood, the research work is truly limitless. The novelty of these alloys consists of chemical composition. These alloys have been named high entropy alloys due to the atomic scale mixing entropies higher than traditional alloys. In this paper, I will present the microscopy and the mechanical properties of high entropy alloy FeNiCrWMn.