Chemical testing of materials

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 Abstract

The steel industry is growing day-by-day as it has applications in almost every field. The researches on steel are growing everyday. Every company is trying to make better quality 38 steels. This report focuses on the tests used for the analysis of steels. In this report, there is a 40 35 focus on chemical analysis of a steel sample. The chemical composition measurement and the effect of different elements on the quality of steels is also focused in this report. The basics of 37 21 Optical Emission Spectroscopy and its principle and how it is used for the chemical analysis of steel is also focused in this report. This report also focuses on the microstructure of a material and tells how the change in microstructure changes the properties of a material. 15 Another topic covered in this report is the heat treatment of steel and how does it help in 2 changing the properties of steel and its application in industries. Tensile Strength is one of the most important parameters of an alloy or a metal, therefore it is also mentioned in this report. Another topic mentioned here is the hardness, different ways of hardness measurement and how to calculate it and how can a material hardness be increased or decreased. The data of above mentioned parameters of some samples is also mentioned in this report.