NPCS Launches Book On "Heat Treatment Of Automobiles"

Nothing can be manufactured without heat treatment including automobiles in which metals are heated and cooled in a controlled manner it improve its performance, durability, properties etc. This books covers everything which is necessary to perform heat treatment.

Online PR News â€“ 28-February-2014 â€“ Heat Treatment is necessary for all kind of heavy equipments including spacecrafts, aircrafts, automobiles, ships, heavy machinery etc. It can do wonders with the metal like improving its corossion resistance that would otherwise corrode, improve its strength, harden the soft metals etc.

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Iron & Steel condtitute the major portion of heat treated metals, but with the modernization of the industry, various alloys of metals like nicke, copper, magnesium, titanium or aliminium are also heat treated for various applications

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Generally heat treatment invlolves three basic steps:-

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1) Depending on the application, heating the give metal to a specified temperature
2) Holding at that temperature for the appropriate amount of time.
3) Cooling the metal as per the methods.

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All these steps are varied depending on the metal under heat treatment and its application

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Heat Treatment Methods

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There are various methods of heat treatment. Some of them are listed below

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1) Nitriding
2) Vaccum Heat Teat
3) Annealing
4) Pit Carburize
5) Carbonitride
6) Stress Relieve
7) Quench & Temper

8) Normalizing
9) The ELectric Induction Process
10) Carburize

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There are various automotive parts that benefit from heat treatment. Some of them are listed below:-

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1) Bearings (bearing race, langed inner/outer bearings, pins etc)
2) Joints (CV joints, tulips male/female etc)
3) Shafts (rear & front axel etc)
4) Assembly (shrink fitting etc)
5) Gears (ring gears, helical gears etc)
6) Brakes (brake shoes etc)

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This book is highly recommended for entrepreneurs who want to enter into this line of business, librarians, consultancy firms, researchers, professionals etc.

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Some of the topics covered in this book are:-

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1) Introduction
2) Materials Used in Autovehicles
3) Bake Hardening Steel Sheets
4) High Tensile Strength Steel Sheets
5) Corrosion Resistant Coated Steel Sheets
6) Constructional Steels
7) Case Hardening Steels
8) Heat Resistant Steels
9) Powder Metallurgy Products
10) Non-ferrous Alloy Powder Metallurgy Products
11) Copper Alloys
12) Aluminium Alloys
13) Magnesium Alloys
14) Titanium Alloys
15) Composite Materials
16) Plastics and Rubber
17) Glass and Ceramics
18) Heat Treatment
19) Types of Heat Treatment
20) Processing Technology in Heat Treatment
21) Carburizing and Carbonitriding
22) Nitro-carburizing
23) Induction Hardening
24) Powder Metallurgy and Sintering
25) Key Issue in Heat Treatment: Atmosphere Control

26) Carbon Potential Control
27) Gas Carburizing Processes
28) Reduced Pressure Carburizing (Vacuum Carburizing)
29) High Pressure Gas Quenching
30) Carbonitriding
31) Low Temperature Nitrocarburizing and Oxy-nitro-carburizing
32) Surface Modification and Hybrid Heat Treatment
33) Solid Lubricant Coatings
34) Emerging Technologies in Materials, Heat Treatment and Surface Engineering
35) Materials
36) Carburizing and Carbonitriding
37) New Nitriding Methods for Aluminium
38) Nitriding of Stainless and Maraging Steels
39) Furnaces for Heat Treatment of Fasteners and Automobile Parts
40) Specifications of the Line
41) Washing Machine
42) Hardening Furnace
43) Quenching Tank
44) Continuous Hot Blast Tempering Furnace
45) Double Layer Dyeing Tank
46) Capacity of the Main Furnace
47) Crucible Type Annealing Furnaces
48) Application
49) Features
50) Specifications of the Bell Type Furnace
51) Features
52) Capacity of the Quenching Tank
53) Capacity of the Continuous Hot Blast Tempering Furnace
54) Capacity of the Dyeing Tank etc

For more information, please visit the following link http://bit.ly/1ajlMY3

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or, you can also visit http://www.niir.org

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