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Rapid heat treatment process using microwaves– A novel approach

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Heat treatment is an essential process for steels especially to enhance the properties of tools. In conventional heat treatment process, the heat transfer through the material is normally by conduction and it results longer soaking time for complete austenitization. Present study deals with reducing the time consumption by rapid heating of steels using microwaves. In this paper, tungsten based high speed steel (T-1) and high carbon chromium steels (D-2) were taken as a work piece and heat treatment was done on it using both conventional and Microwave furnace in a protective environment. Hardness tests were conducted using Micro Vicker Hardness tester and equivalent Rockwell hardness values were noted. The result shows that the time taken and power consumption for microwave heating is very less on comparing with conventional heating without affecting the mechanical property.

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Electromagnetic treatment of genetic and infectious diseases including the Zika virus

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This study is extension of the paper, "Electromagnetic Treatment of Genetic Diseases," (Escultura, J.Biomaterials and Nanobiotechnology (SCIRP), 3(2)), 2012). Every physical system including the gene has natural vibration due to impact of cosmic waves. The gene determines every physical characteristic of living cell. Wavelength is the principal determinant of its vibration characteristics, amplitude variation (profile) secondary. For genetic or infectious disease, the gene determines every symptom being a physical characteristic. A gene is identical pair (each mirror image of the other) of sequences of its component base elements cytosine, guanine and adenine or thymine. A gene projects brain waves that convert superstrings to tissues of living cell in cellular membrane. Consider undesirable microbe gene that determines undesirable symptom. Microbe enters the body to feed (virus enters cell's nucleus to replicate itself in cellular membrane). Treatment entails producing radiation that resonates with this gene. Partial resonance occurs if they have same wave length. Sinusoidal wave of same wavelength resonates with it, superposes its vibration characteristics on gene's vibration characteristics and distorts and removes the undesirable symptom. However, this may have same effect on normal genes. The effect is isolated by distorting its sinusoidal wave profile to roughly mimic profile of the undesirable vibration characteristic. Then full resonance with this gene alone occurs. By raising radiation intensity sufficiently this gene is sterilized or destroyed and the undesirable symptom stops replication. Not only is the disease treated, the spread of the disease is halted without injury to normal cell, i.e., without any side effect.

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