

An Improved Process for Recruitment, Selection and Training of Employees of the Overseas Indian Industries

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Abstract

This paper analyzes various HR processes and systems that are being practiced by Indian corporate sector for identifying and deploying international employees and the merits of the processes that are being currently adopted by the Indian organizations. Based on the study, an effective process for recruiting, selection and training of employees of the overseas Indian industries has been suggested.

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Start Oscillation Current and Mode Competition in Gyromonotron

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Abstract

This paper present start-up conditions and elimination of mode competition in a 140 GHz gyromonotron operating at transverse electric (TE_{10,4}) mode. MATLAB simulation for coupling coefficient has been used to decide the electron beam position and found to be at 0.49 times waveguide wall radius. Start oscillation current computation for the desired mode resulted in the requirement of magnetic flux density equal to 5.68 Tesla. Desired mode of excitation (TE_{10,4}) has been ensured by suitably choosing the start oscillation current $I_b > 3.5 \text{ Amp}$ and thereby suppressing other competing modes.

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Audio Techniques for Representing Graphics for Visually Challenged Persons - An Overview

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Abstract

Auditory techniques can offer an alternative channel for presenting visual information especially when the visual senses are impaired or overloaded. Although dynamic text information can be rendered non-visually through speech, rendering dynamic graphic information through non-visual means is an extremely challenging task. The important aspect of vision is the ability to view many things simultaneously and to switchover quickly from one context to another which is missing in the non-visual senses. Research attempts have been made to represent graphics through speech and non-speech sounds for comprehending diagrams. A distinct advantage of Audio is that matured technology is available for building low cost displays.

The authors in the present article, have made an attempt to review the various research approaches available in the auditory modalities namely auditory icons, musical notes, sonification and compressed speech and their suitability to represent graphical information to the visually challenged and visually impaired persons.

Key words: Visually challenged, non-visual graphics representation, dynamic information, audio-modalities, speech, sonification, earcons, auditory-icons, spearcons, 3D spatial sound, tactile-modalities.

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Study of Molecular Interactions in Binary Liquid Mixture of 1,3,5-Trimethylbenzene with Octan-1-ol using Volumetric, Viscometric, and Acoustic Properties Determined at T = (298.15, 303.15, 308.15, and 313.15) K

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Abstract

Densities (ρ), viscosities (η), and speeds of sound (u) of binary mixture of 1,3,5-trimethylbenzene with octan-1-ol over the whole composition range were measured at four different temperatures (298.15, 303.15, 313.15, and 313.15) K and atmospheric pressure. Densities and speeds of sound were measured by using an Anton-Paar DSA- 5000 digital vibrating-tube densimeter. Viscosities were measured with a modified Ubbelohde viscometer. Excess molar volumes, V^E , deviations in viscosity, $\Delta\eta$, and excess isentropic compressibilities, K_S^E were derived from the experimental values of density, viscosity, and speed of sound. The binary data of V^E , $\Delta\eta$, and K_S^E were correlated to the mole fraction by using the Redlich–Kister equation.

Key Words: Excess molar volumes, deviations in viscosity, excess isentropic compressibilities, 1,3,5-trimethylbenzene and octan-1-ol.

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High Performance Concrete-A Need of Future

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Abstract

This paper addresses the development of High Performance Concrete in the past 15-20 years along with the performance characteristics and different types of high performance concretes. Classification based on strength related properties and standard design requirements are also discussed. A High performance concrete is developing fast as a modern structural material with a high potential. The numbers of structural applications are increasing as for instance testified by the recent symposiums and conferences held on HPCRC. At present studies are being carried out with the aim to come to an international recommendation for the design of structures with HPCRC. Research projects are being carried out in order to supply missing information in relevant areas.

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