Turbines

Newsletter 18/04/2018
Volume 3 Issue 2

SECAB.I.E.T, MECHANICAL ENGINEERING
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"Education is the most powerful weapon which you can use to change the world"

From HOD'S Desk

It is my pleasure to welcome you to the department of mechanical engineering at the SECAB institute of engineering and technology Vijaypur. Mechanical engineering has been thought of traditionally as a professional discipline and the mechanical engineers of today are multidisciplinary, with knowledge from other branches of engineering.

The academic programmes of the department reflect not only the core areas of mechanical engineer but also the research specialization of the faculty. All the faculties are working in close co-operation while retaining individual identities. We provide our students with a solid engineering education that focuses on creativity, innovation, strong ethical responsibility and place equal emphasis on developing strong leadership qualities in our students.

As far as the faculties of the department is concerned, I am very happy to inform you that, we have great team of well qualified, dedicated, devoted, young, energetic and dynamic faculty members who are very brilliant in handling the challenging subjects in a very easy and graspable way by applying a various new teaching methods and intelligible demonstrations during the course of work. Further, Faculty pay dedicated attention to vigorous research and students' projects engendering in them untiring efforts, indomitable will, immense patience and soft skills as desired by industry.

Md Shahabuddin
4th SEM.

AMMONIA: A NATURAL REFRIGRENT

The decision as to which refrigerant should be used in a refrigerating or conditioning system is based on the major criteria of safety. Costs and environmental protection. But against the background of constantly increasing energy prices, the energy consumption of a system also plays an increasingly important role. Ideally The Chosen refrigerant should have excellent thermodynamic properties, high chemical stability and good physical characteristics. Further more, it should have no or only a negligible impact on the environment, while also being inexpensive and available worldwide. However, there is no one refrigerant that fulfilled all these requirements and show in practice, the decision for the most suitable refrigerant depends on a series of different factors. Here the operating area and the operator requirements are taken into account, together with the installation site and environmental aspects. But it is above all actual rating of the overall refrigeration system while taking account of part load condition that has a crucial influence on energy consumption, as the overall concept of a refrigeration system has greater influence on efficiency than the choice of refrigerant. However a number of current projects show that System Operating with natural refrigerants are particularly efficient and environmental friendly.

Ammonia is the refrigerant with the demonstrably best thermodynamic properties. It is the only natural refrigerant that industry never wanted to dispense with on account of its high efficiency. Ammonia is also unbeatable in ecological terms that has no ozone depletion potential and global warming potential. Thanks to the highest C.O.P of ammonia systems. Industrial systems with capacities exceeding 500 kw ammonia is simply unsurpassed in terms of energy and cost efficiency. It is also find increasing use on a smaller scale, for example in system with a capacity of less than 500 kw where the quantity of Ammonia can be reduced when choosing a suitable secondary refrigerant.

Mishra Bhanu Pratap
6th SEM

GLOBAL WARMING

Many researchers, engineers and environmentalists are expressing deep concerns about changes in the overall climate of the planet. Fossil fuels are being continuously used to produce electricity. The burning of these fuels produces gases like carbon dioxide, methane and nitrous oxides which lead to global warming. Deforestation is also leading to warmer temperatures. The hazard of global warming is continuously causing major damage to the Earth's environment. Most people are still unaware of global warming and do not consider it to be a big problem in years to come. What most people do not understand is that global warming is currently happening, and we are already experiencing some of its withering effects. It is and will severely affect ecosystems and disturb ecological balance. Because of the treacherous effects of global warming, some solutions must be devised. Above all, alternative energy sources (solar, wind, hydro, geothermal, bio mass) need to be seriously pursued. Finding and using renewable sources of energy is one of the methods to combat the ever increasing global warming effectively.

Krishna Yalagureshrao
8th SEM

Soil Erosion

A Soil erosion is the detachment and movement of soil material. The process may be natural or accelerated by human activity. Depending on the local landscape and weather conditions, erosion may be very slow or very rapid.

Natural erosion has sculptured landforms on the uplands and built landforms on the lowlands. Its rate and distribution in time controls the age of land surfaces and many of the internal properties of soils on the surfaces. The formation of Channel Scablands in the state of Washington is an example of extremely rapid natural, or geologic, erosion. The broad, nearly level interstream divides on the Coastal Plain of the Southeastern United States are examples of areas with very slow or no natural erosion.

Accelerated erosion is largely the consequence of human activity. The primary causes are tillage, grazing, and cutting of timber.

The rate of erosion can be increased by activities other than those of humans. Fire that destroys vegetation and triggers erosion has the same effect. The spectacular episodes of erosion, such as the soil blowing on the Great Plains of the Central United States in the 1930s, have not all been due to human habitation. Frequent dust storms were recorded on the Great Plains before the region became a grain-producing area. "Natural" erosion is not easily distinguished from "accelerated" erosion on every soil. A distinction can be made by studying and understanding the sequence of sediments and surfaces on the local landscape, as well as by studying soil properties.

ENIFFER .P.S 7th sem

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