

TRANSFORMING POWER DISTRIBUTION

India is a millennial, rapidly transforming nation. It is witnessing a surge in industrial as well as household consumption, as consequence of greater dependency on electricity to perform functions that are a part of everyday urban life and automation of processes. The phenomenon is irreversible for a nation that has the highest youth population⁽¹⁾ in the world and is inclined towards technology, which will push the demand to rise at a tremendous pace.

As a result, even though India is now a power surplus nation, growing consumption and the corresponding increment in energy loss during transmission and distribution is a big obstacle to government's Sustainable Development Goal to 'Ensure access to affordable, reliable,

sustainable and modern energy for all' and trim the nation's growing power bill.

Therefore, enhancement in transmission & distribution technologies goes a long way in deeper penetration of the same amount of power generated.

Hitachi, one of Japan's pioneering technology companies with global footprint that have been at the forefront of driving Social Innovation in an array of sectors through Innovative technologies, products and solutions backed by robust R&D, is Co-Creating solutions to optimize India's energy transmission and distribution sector.

Realizing the enormous possibilities that metals bring to our world where resource optimization is a continuous challenge, Hitachi Metals (India) Pvt. Ltd., a Hitachi Group Company, a leader in cutting edge path-breaking metal technologies, is bringing Social Innovation in the Energy sector by helping customers achieve maximum productivity through minimum loss.

Globally recognized for its significantly low magnetic core, Amorphous Metal Metglas® can harness energy losses and is very useful for making energy efficient



Amorphous Metal Coils & Core



Amorphous Metal Ribbons

Metglas®

Reduces the No-load losses
in a distribution transformer
by 60-75%

transformers. This revolutionary metal helps reduce the no load loss in a distribution transformer by 60-75%⁽²⁾ as compared to the conventional silicon steel.

Thus, the seemingly minor innovation brings innumerable advantages to the country, environment, the energy producer, the service provider and most of all to the society, in the large.

As a much higher percentage of the energy produced reaches the consumer, far more people can access the same amount of power generated. This in turn helps minimize the need for more power plants, reduces the consumption of irreplaceable natural and other resources. Ergo, contributing to their conservation and decline in

pollution levels, less dependency on import of fossil fuel for power generation that helps bring down the import bill and conserve nation's valuable foreign currency. The cumulative effect thus produced contributes to a sustainable society and India's self-reliance.

Concurrently, taking cognizance of the highly polluting conventional fossil fuel power generation, the government is also seeking ways to increase the share of renewable power generation with special focus on the abundant Solar Energy available in the country.

Hitachi Metals (India) is helping the society by ensuring this transformation is met through their products.

In fact, compared to a conventional inverter used at home, which offers 80-90% efficiency, a solar inverter has 98-99% efficiency because of its special components. By replacing conventional silicon steel with Amorphous Metal cut cores inverter's total efficiency increases significantly.⁽²⁾

The amorphous core manufactured by Hitachi Metals act as an important component in these solar inverters. They ensure that the inverter works efficiently providing more power with the same input, thereby contributing to a greener, sustainable society.

Source -

(1) http://mospi.nic.in/sites/default/files/publication_reports/Youth_in_India-2017.pdf

(2) <http://www.infraline.com/infraline-energy/interviews-details/20611>



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