

Forward to:

MU. Syed Usman Ali
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TMA Head Office

From: "BFZ" <bfz@prgmea.org>
To: <tma@towelassociation.com>
Cc: <samad@espire.com.pk>
Sent: Wednesday, December 29, 2010 10:26 AM
Attach: Training Contents.doc; Training schedule -prgmea updated.PDF
Subject: PRGMEA offers Training on Energy Conservation and Self energy Audit

Dear Sir,

This is to inform you that a Training on Energy Conservation and Self Energy Audit for the capacity building of **PRGMEA Member** Companies and to develop Auditing abilities for cost saving in Energy intensive processes of the industry, is being offered at PRGMEA in collaboration of BFZ gGmbH, Germany

Fees for Two participants for 3 Full days' classes at PRGTTI and 1 or two days factory based practical demonstration would be **Rs.5500/-PKR**. And **last date of registration is 08-01-2011** further details of the course can be seen in the attached advertisement.

Interested Members are required to send the nominations in reply to this mail or contact with following mentioned official.

Thanks and best regards,

Abdul Ahad
Group Consultant PRGMEA SZ
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12/29/2010

Energy Auditing

- Purpose of the energy audit
- Types of Energy Audits
- Audit Protocol
 - Defining Objective of Audit
 - Scope of Audit
 - Use of Checklists
 - Opening Meeting
 - Closing Meeting
- Do's and Don'ts of Energy Audits
- Audit Methodology
 - Preliminary Energy Audits
 - Detailed Energy Audits
- Facility description and data needs
- Major systems in the facility
- Data forms for recording energy related information
- Collecting the actual data
- Identification of preliminary energy efficiency opportunities
- Instrumentation used in Energy Auditing
- Preparation of Energy Audit Reports

Calculation of pay back period

Electrical Systems (Generation, Distribution, Consumption)

- Self Generation
- Purchased Power from Grid
- Power Factor & Power Quality
- Demand and Energy Load Factors
- Load management
- Understanding Electrical Tariffs/Bills
 - Electric Distribution (Layout of distribution system, Sizing of cables, Voltage & Ampere Fluctuations at distribution boxes, high or low voltage distribution, harmonic in the mill, star-delta connections etc.)
 - Electric Consumption
 - sizing of motors, motor efficiencies, electrical load management, use of inverters/ soft-starters/ VFDs, Pumps, Fans etc.)
 - Improved motor belts and drives
 - Lighting

Mechanical Systems

- Thermal Energy generation,
- distribution, consumption (that includes steam generation by boiler, its efficiency, feed water treatment, steam quality, steam leakages, condensate return, water makeup, etc., insulation issues)
- Energy Conservation in Steam Pipeline Distribution & Condensate Return Systems
 - Problems in Low temperature insulation
 - Factors to be considered in Applying Thermal Insulation
- Compressed Air generation & Distribution (generation, secondary storages, leakages etc.)
- Energy Conservation in Compressed Air Distribution System