Waste Heat Recovery Systems (WHR) in the Cement Industry

MEERIM VISIONARY TRAINING (FZE)
INSPIRING AMBITION AND SUCCESS

Training Program

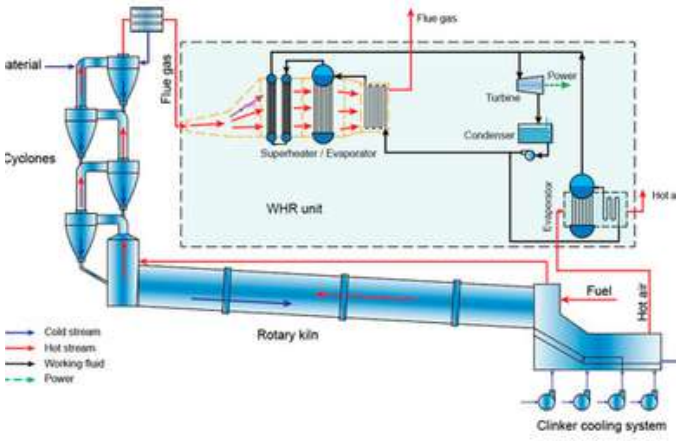
24-28 NOV 2025

IN DUBAI, UAE

Why Invest in This Training?

Because energy is money, and cement plants are losing millions in wasted heat every year. Lack of WHR knowledge leads to:

- Underperforming systems
- Costly downtime and maintenance
- Reduced ROI on multi-million-dollar assets



This training helps organizations turn waste into profit.

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TECHNICAL PROPOSAL

WASTE HEAT RECOVERY SYSTEMS (WHR) IN THE CEMENT INDUSTRY

Training Audience:

- Plant Managers & Production Engineers
- Energy & Sustainability Managers
- Mechanical, Process & Electrical Engineers
- Maintenance & Reliability Teams
- Environmental Compliance Specialists

Training Objectives:

- Advanced technical skill development
- Enhanced career growth in energy & sustainability roles
- Stronger capability to lead WHR initiatives
- Certificate of Completion for professional recognition

Training Overview:

Waste Heat Recovery Systems are no longer a luxury in cement manufacturing — they are a strategic investment. With rising fuel costs, sustainability mandates, and carbon reduction requirements, WHR technology unlocks massive operational and financial gains by converting waste heat into clean power.

This course equips engineers, energy leaders, and plant management teams with the practical knowledge to design, operate, optimize, and sustain WHR projects in cement plants.

Warehouse Management Excellence

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KEY OUTCOMES

ENHANCING ENERGY EFFICIENCY, SUSTAINABILITY & PROFITABILITY

Organizational Benefits:

- Energy cost reduction — save 10–30% on power consumption
- Carbon footprint reduction — major sustainability advantage
- Improved reliability — fewer breakdowns and outages
- Better decision-making for expansion & upgrade projects
- Stronger compliance with ESG, ISO 50001 & regulatory requirements

Personal Benefits:

- After completing the training, participants will be able to:
- Assess WHR feasibility and design recommendations
- Improve WHR efficiency and plant energy savings
- Reduce carbon emissions and environmental footprint
- Prevent failures and extend WHR system lifetime
- Calculate ROI, power generation rate & economic returns

Training Methodology:

- *Instructor-Led Classroom Training: Interactive sessions led by an expert with global cement industry experience*
- *Case Studies & Best Practices: Real examples from GCC & global WHR projects*
- *Performance Monitoring & Troubleshooting Workshops: Practical insights to improve plant reliability and avoid costly failures*
- *Assessments & Certification: Knowledge tests, feedback sessions, and certificate of completion provided*

GROUP OFFER: 3+1 COMPLIMENTARY REGISTRATION.

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Training Modules:

Day 1 — Introduction to WHR in Cement Plants

- Cement production process & heat balance review
- Sources of waste heat (kiln & preheater exhaust gases)
- WHR technologies overview: ORC, Steam Rankine Cycle, Kalina Cycle
- WHR integration with existing systems
- KPIs for energy recovery
- Case studies: GCC & global cement plants

Day 2 — WHR System Design & Key Equipment

- System configurations & layout design
- Heat exchangers, boilers (AQC & PH), turbines & generators
- Instrumentation & control systems
- Efficiency optimization strategies
- Design standards & regulatory compliance

Day 3 — Operation & Performance Optimization

- WHR plant operating modes & load management
- Heat recovery efficiency improvement
- Energy forecasting & performance monitoring
- Troubleshooting common operational challenges
- Digitalization & predictive analytics for WHR

Day 4 — Maintenance & Reliability Strategies

- Preventive & predictive maintenance planning
- Corrosion, fouling & material degradation
- CMMS and vibration monitoring for turbine systems
- Safety protocols & emergency response
- Spare parts planning & lifecycle cost analysis

Day 5 — Economic & Environmental Impact

- Investment cost vs. ROI vs. energy savings
- Carbon credits, sustainability targets & ESG reporting
- Feasibility studies: CAPEX/OPEX, NPV, IRR & payback period
- Optimization of emissions & heat utilization
- Final group exercise: WHR business case presentation

TALK TO US

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MEERIM Visionary Training FZE:
Mobius Institute: An Authorized Training & Examination Center

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