2024 TRAINING

TSI
TÉCNICAS Y SERVIICIOS DE INGENIERÍA, S.L

ROOT CAUSE FAILURE ANALYSIS SEMINAR – CASE STUDIES (21 HOURS)

1st call: April 10 to 12
2nd call: October 16 to 18

CUSTOMER SATISFACTION INDEX
8,58 /10

"Take the opportunity to learn with your real cases and have a preliminary diagnosis at the end of the course"

SCHEDULE

Mornings: 9:00h to 14:00h | Afternoons:15:00h to 18:00h
Fridays: from 9:00h to 14:00h

PRICE

Course: **1.100€** + VAT (Includes documentation, lunch and coffee on breaks)

PLACE

TSI's headquartes in Madrid

Course Director: Mr. Publio Beltrán Palomo
Trainers: Engineers specialized in noise and vibrations

Maximum number of attendees: 15
For more than two attendees per company, a 15% discount will be applied.
Priority booking for TSI clients.

KEYS TO SUCCESS

- **Soundness and Experience:** Course derived from the MPA course and which has been given since 1983 with the participation of 1,500 companies from the national and foreign fabric.
- **Training Scheme:** "Aseptic Training" **-** independent of commercial brands - aimed at the Qualification of Personnel with an open and practical approach. "The identification and resolution of faults does not depend on one or another type of equipment, but on the adequate qualification of the personnel.
- **Training Staff:** Made up of specialised TSI personnel with more than thirty-five years of experience and backed by more than 2,000 studies of Fault Diagnosis and Resolution.
- **Continuous Training:** Participation in this Course leaves you with a "permanent open window" to a "List of TSI Specialists" who will attend and support your queries on equipment handling, diagnosis and troubleshooting.

COURSE CONTENT

1. INTRODUCTION.
2. FINE TUNING: A REVIEW OF BASIC CONCEPTS.
3. THE METHODOLOGY OF FAULT CONSULTANCY: WHAT IS IT AND HOW IS IT APPLIED?
4. EXPERIMENTAL FAULT DIAGNOSIS TECHNIQUES. WHEN AND HOW TO APPLY THEM? HOW TO OVERCOME THE LIMITATIONS OF MY EQUIPMENT?
5. CORRECTION METHODS I: DYNAMIC BALANCING: Regulations, In-situ and Bench Balancing. Balancing in one and two planes: The Technique. CASE STUDIES.
6. CORRECTION METHODS II: "REINFORCING MY STRUCTURE": WHEN AND HOW? Knowledge of analytical techniques for optimisation. Real cases.
7. CORRECTION METHODS III: ISOLATION OF MACHINES AND EQUIPMENT.
8. REAL CASE STUDIES. IDENTIFICATION OF FAILURES IN: Bearings, Fans, Resonances, Feedwater Pumps, Centrifugal Compressors, Gearboxes, Electric Motors, Gas Turbines, Hydraulic Pumps, Large Structures, Turbogenerator Groups, Wind Turbines, etc.
9. RESOLUTION OF BREAKDOWNS CONTRIBUTED BY THE ATTENDEES (*).
10. FINAL EVALUATION AND COURSE CONCLUSIONS.

PRACTICAL DEVELOPMENT
As a complement to the theoretical presentation, participants take part in working groups in the resolution of Real Practical Cases (*). A certificate of attendance will be awarded.

(*) Note: The resolution of the practical cases provided by the attendees requires the supply of measurements (spectra) and tests carried out. TSI undertakes to attend each and every one of the documented cases that are presented.

CONTACT US

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ADDICIONAL INFORMATION

Possibility of taking the course online or face-to-face

WHO IS IT INTENDED FOR?
Maintenance Technicians, Plant Managers,
Engineering Departments, Projects, Management, Department Managers, Quality Control.

It is advisable to have previous knowledge of this methodology and its tools (TSI MPA course).

FORMALISATION OF ENROLMENT
Reservations can be made by telephone or e-mail. Subject to advance payment of the fee by cheque or bank transfer.

CANCELLATION POLICY
Cancellation up to 20 working days before the start of the course will be refunded minus a 15% administration fee, plus the cost of the exam. The reservation can be occupied by another person at no additional cost.

For ADAPTED COURSES, please contact TSI