

Who should attend

- Machinery and Mechanical Plant Maintenance Engineers.
- Instrumentation and Electrical Maintenance Engineers.
- Maintenance Planners, Supervisors and Managers.



Registration Fee of
\$ 1400/ SR 5250

must accompany this registration form.

REGISTRATION FORM

Machinery Vibration Analysis

March 24th – 27th, 2012

Name:-----

Title:-----

Employer:-----

Address:-----

Telephone:----- Fax:-----

e-mail:-----



Dr. Aly El-Shafei is a Certified Vibration Analyst, Category IV. He holds a Ph.D. from the Massachusetts Institute of Technology (MIT) and is a world renowned expert on vibration analysis, rotordynamics and machinery diagnostics. In addition to serving as Managing Director at RITEC, Dr. El-Shafei

is also a Professor of Vibration Engineering at Cairo University, Egypt. Prof. El-Shafei chairs the ISO working group ISO/TC108/SC2/WG10 responsible for developing international standards on machinery vibration diagnostics, and serves on the IFToMM Scientific Committee on Rotordynamics, the Vibration Institute Certification Committee and the IMechE Scientific Committee on Vibrations in Rotating Machinery. Dr. El-Shafei is known as a seasoned diagnostics engineer and has solved many chronic problems worldwide. He is also known worldwide for his work on Squeeze Film Dampers, and the developing of new technology for the control of rotating machinery vibration. Dr. El-Shafei has received 3 US patents and has published more than 80 papers on rotordynamics and machinery diagnostics.

For further information, please call RITEC in Egypt

Tel: +20-2-2753-7447

Fax: +20-2-2516-6918

www.ritec-eg.com

E-mail: ritec@ritec-eg.com

**In Saudi Arabia, please call:
Pan Gulf Industrial Systems**

Attn: Mr. Tarik Abbas

Tel: (+966 3) 8975651

Fax:(+966 3) 8975654

E-mail: tarik.abbas@pgisystems.com



Pan Gulf Industrial Systems Co.

**The Official Representative of
RITEC
and the Vibration Institute
In Saudi Arabia**

*Invite you to attend the
Official Vibration Institute short course*

Machinery Vibration Analysis

In preparation for ISO Category III exam

Course Instructor

Dr. Aly El-Shafei

March 24 – 27, 2012

Golden Tulip, Al-Khobar , Saudi Arabia

ABOUT THE COURSE

The most widely accepted measure of machine condition is its vibration signature. This course is designed to expose more advanced techniques of vibration analysis of machinery, with the aim of using these analysis techniques for machinery monitoring and diagnosis.

This course provides a thorough review of time and frequency analysis including time waveforms, orbits, spectral and phase analysis for machinery vibration. Applications to industrial machinery including gearboxes, motors and generators and centrifugal machines are presented. Vibration control including balancing and vibration isolation and damping are discussed.

The course provides a unique format in which an abundance of case studies are presented as application of machine condition analysis.

The objective of all of the **Vibration Institute** and **RITEC** courses is to prepare people to be better analysts. This course will enable the attendees to gain understanding of vibration principles and techniques and add to their practical knowledge of machines. With these tools people will be better able to think through vibration problems.

Vibration Institute and **RITEC** courses are designed to provide the attendees with theory, techniques, and procedures as well as practical case histories that illustrate ways to analyze various types of equipment. In-class demonstrations and workshops will help in learning the methods used to solve vibration problems. In addition to field experience, this course should be sufficient to prepare the attendees for the ISO 18436 Certification Exam Category III to be held on March 29th, 2012. Certification fee is \$470 per person. Deadline to register is on January 8th, **A preparatory workshop will be conducted on March 28th, 2012.** Fee for workshop is \$200 per attendee.

PROGRAM

Each day in this four day course will be divided into four sessions as follows:

Session I from 08:00 to 09:30

Coffee Break

Session II from 10:00 to 11:30

Lunch

Session III from 12:30 to 14:00

Coffee Break

Session IV from 14:30 to 16:00

The course content will be covered as follows:

Saturday, March 24th, 2012

Theory and General Principles. Physical concepts of Vibration of Machinery. Vibration Measurement. Data Acquisition. Data Display. Data Processing. Measuring and Analysis Instruments.

Sunday, March 25th, 2012

Time and Frequency Analysis. Orbit and Phase Analysis. Resonance and Critical Speed Testing. Condition Evaluation. Basic Dual Channel Testing.

Monday, March 26th, 2012

Vibration Control. Vibration Isolation and Damping. Vibration Correction. Balancing of Rotating Machinery. Balancing Pitfalls. Vector Diagrams.

Tuesday, March 27th, 2012

Fault Diagnostics Applications: Rolling Element Bearings. Operating Speed Including Fluid Film Bearings. Centrifugal Machines. Motors & Generators. Gearboxes. Rolls, Spindles and Presses.

HOTEL AND REGISTRATION

The course will be held at InterContinental Hotel, Al-Khobar, Saudi Arabia, in the period January 28th – 31st, 2012.

The usual course fee of \$ 1400 /SR 5250 covers the cost of all sessions, luncheons, beverage breaks and notes on selected topics.

Please register in advance. Use the registration form and mail it to **Pan Gulf Industrial Systems Co.** at the following address:

Pan Gulf Industrial Systems Co.
P.O.Box.2473; Al-Khobar 31952 KSA
Tel: (+966 3) 8975651 Fax:(+966 3) 8975654
E-mail: tarik.abbas@pgisystems.com

Attn: Mr. Tarik Abbas

Participants will receive confirmation of registration by mail. If you must process a company check, enclose a copy of the registration form with the check. Make check payable to **PGIS.**

The course is taught by Certified Analyst from the Vibration Institute, with at least 10 years experience in vibration analysis, condition monitoring and training.

The **Vibration Institute** is a not-for-profit organization incorporated in the USA to spread the knowledge among the specialists working in the field of vibrations through conferences, seminars, meetings and publications. The Vibration Institute publishes **Vibrations** and holds an annual meeting in the USA in June.