

**Who should attend**

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



Registration Fee of \$ 1400 / SR 5250 must accompany this registration form.

**REGISTRATION FORM**

**Basic Machinery Vibrations**

March 17<sup>th</sup> – 20<sup>th</sup>, 2012

Name:-----

Title:-----

Employer:-----

Address:-----

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

e-mail:-----

RITEC is engineering, vibrations and maintenance consultancy company.

RITEC is the **sole official representative** of the Vibration Institute in the Middle East.

RITEC conducts vibration surveys and engineering studies to remedy vibration problems.

RITEC provides technical and managerial consultancy, assisting clients to define maintenance policies, systems and programs.

RITEC conducts engineering studies to modify plant design, and in order to support clients to overcome commissioning problems and to verify any new design proposals.

RITEC provides the technical training and on site back up to build up the experience of field plant engineers.

RITEC provides training and consultancy services in the field of predictive maintenance and maintenance management.

**For further information, please call RITEC in Egypt**

**Tel: +20-2-2753-7447**

**Fax: +20-2-2516-6918**

[www.ritec-eq.com](http://www.ritec-eq.com)

**E-mail: [ritec@ritec-eq.com](mailto:ritec@ritec-eq.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](mailto:tarik.abbas@pgisystems.com)**



**Pan Gulf Industrial Systems Co. (PGIS)**

**The Official Representative of RITEC**

**and the Vibration Institute In Saudi Arabia**

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

**Basic Machinery Vibrations**

In preparation for ISO Category II exam

March 17 – 20, 2012

Golden Tulip Hotel, 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 the techniques of vibration analysis of machinery, with the aim of using these analysis techniques for machinery monitoring and diagnosis.

This course provides an overview of techniques used to measure machinery vibration and assess machinery condition. The emphasis is on techniques to verify the existence and the extent of faults and means to evaluate the current condition of a machine, including machine testing.

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. Experts have learned that "cook book" vibration analysis is of limited value because vibration problems seldom follow fixed patterns.

**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 II to be held on March 22<sup>nd</sup>, 2012.** Deadline to register is on March 1<sup>st</sup>. Certification fee is \$470 per person. **A preparatory workshop will be conducted on March 1<sup>st</sup>, 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 17<sup>th</sup>, 2012**

Basic Machinery Vibration Analysis. Physical concepts of Vibration of Machinery. Vibration Measurement. Data Acquisition. Vibration Transducers. Data Display. Data Processing. Measuring and Analysis Instruments. Signal Conditioning and Data Analysis.

### **Sunday, March 18<sup>th</sup>, 2012**

Fault Diagnosis. Frequency Analysis. Basic Machinery Fault Analysis: Rolling Element Bearings, Gearboxes, Motors, Pumps, Compressors, and Fans.

### **Monday, March 19<sup>th</sup>, 2012**

Detection of Faults from Vibration Data. Machine Condition Analysis. Machine Testing. Acceptance Testing. Periodic Monitoring. Measures and Measurement Points. Trending and Reporting.

### **Tuesday, March 20<sup>th</sup>, 2012**

Basic Balancing of Rotating Machinery. Balancing Pitfalls. Vector Diagrams. Resonance Testing. Interference Diagrams. Impact Tests. Determination of Natural frequencies.

## HOTEL AND REGISTRATION

The course will be held at Golden Tulip Hotel, Al-Kobar, Saudi Arabia, in the period October 15<sup>th</sup>- October 18<sup>th</sup>, 2011.

The 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](mailto:tarik.abbas@pgisystems.com)**

**Attn: Mr. Tarik Abbas**

Participants will receive confirmation of registration by e-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.