

REGISTRATION FORM

Name : _____

Designation : _____

Organisation : _____

Address : _____

Tel. No. _____

Fax : _____

E-mail : _____

Type of Industry / Business _____

DD No. _____

Date : _____

Amount Rs. _____

Name of Bank : _____

Signature _____

Please forward the registration form together with Demand Draft or an atpar cheque for Rs.12,500 (which is inclusive of 10.3% service tax) drawn in favour of "FRP INSTITUTE", to:

Dr. A. Selvam

Executive Secretary

FRP INSTITUTE

N.P. 23/24, Developed Plot,
Ekkattuthangal, Chennai-600 097.

Mobile : +91 9841426644

FRP Institute is a professional society registered under Govt. of Tamil Nadu Societies Act-1975. It has an all India membership consisting of scientists, composites specialists, fabricators, raw material suppliers, consultants, designers, defence laboratories, educational institutions etc. The Institute works in close collaboration with the industries and institutions for upgrading the *Composites Technology* and to promote the growth of the Indian composites industry.

FRP Institute works with the following three main objectives in-order to promote the growth of industry:

i) Education & Training

ii) Technology & Quality

iii) Growth & Export

HRD Programme

Well-trained man power is an essential requirement for the rapid growth of composites industry. The education and training programmes are to meet this need. The HRD programmes of FRP Institute are planned to achieve this objective.

For further details and information on the programme.
contact :

Dr. A. Selvam

Executive Secretary

FRP INSTITUTE

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Visit Us : www.frpinstitute.org



**A SIX DAY'S
TRAINING PROGRAMME**

ON

**FIBRE REINFORCED PLASTICS (FRP)
TECHNOLOGY**

from

16th Nov to 21st Nov 2009

Venue

Hotel Sakithyan

#42, Thanickachalam Road
(Near Hindi Prachar Sabha)
T.Nagar, Chennai 600 017.

Organized by

FRP INSTITUTE
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INTRODUCTION

Advanced Fibre Reinforced Composites have emerged as an important material system for industrial and social applications. India has a good industrial base for making various products using these materials. However, there is no corresponding effort to impart education on how to use these materials and manufacture them. FRP Institute is conducting this training programme for engineers to give the basic understanding of the technology, manufacturing methods and applications. The aim is to provide the necessary knowledge to take up employment in composites (FRP) industry or enhance knowledge, if already employed in this industry.

Composites Industry, like information technology, is a knowledge driven industry. Hence acquiring the basic knowledge is very essential for engineers to be effective in the industry for making world-class products.

The training programme is intended to cover the technology of fibre reinforced plastics (FRP) product manufacture employing various processes.

It consists of lectures, practical work and video demonstrations. The lecture sessions are intended to give the basic understanding of raw materials, manufacturing methods, properties and product design. Hand-lay up, compression moulding, filament winding, pultrusion and vacuum infusion moulding processes will be covered in detail. Although the programme covers all types of fibre reinforced plastics, emphasis will be mainly on glass fibre reinforced thermoset plastics.

COURSE OUTLINE

Monday 16-11-2009

0900 – 1100 hrs. Introduction to Composites Materials
1115 – 1215 hrs. Reinforcements
1215 – 1300 hrs. Slide presentation on Materials.
1400 – 1700 hrs. Practical Demonstration on materials, laminate making

Tuesday 17-11-2009

0900 – 1030 hrs. Polyester Resins
1045 – 1200 hrs. Glass fibre
1200 – 1300 hrs. Hand lay up
1400 – 1700 hrs. **Practical demonstration with printed surface mats**, laminate making, Product making.

Wednesday 18-11-2009

0900 – 1000 hrs. Epoxy & Phenolic Resins
1000 – 1100 hrs. Fillers, Additives and Core materials
1115 – 1300 hrs. Sandwich construction
1400 – 1700 hrs. Practical demonstration on laminates with stiffeners, sandwich construction and repair work, **demonstration of vacuum infusion method.**

Thursday 19-11-2009

0900 – 1045 hrs. Vacuum infusion methods
1100 – 1200 hrs. Pultrusion
1200 – 1300 hrs. Filament winding
1400 – 1700 hrs. Visit to Industry

Friday 20-11-2009

0900 – 1000 hrs. Design Considerations
1000 – 1100 hrs. Materials selection
1115 – 1300 hrs. FRP Applications in Infrastructure, Chemical, Energy and Electrical
1400 – 1500 hrs. Moulding compounds, (DMC, SMC) prepreps
1515 – 1615 hrs. Compression moulding
1615 – 1700 hrs. Product cost estimation with exercises

Saturday 21-11-2009

0900 – 1045 hrs. Testing of fibres, resins and Composites
1100 – 1200 hrs. Polymer concrete
1200 – 1300 hrs. Finishing operation and Joining Techniques
1400 – 1500 hrs. Quality Evaluation
1515 – 1615 hrs. Setting up FRP Industrial production units
1615 – 1700 hrs. Concluding session

FOR WHOM: This programme is suitable for engineers and technologists interested in the manufacture of FRP Products. This programme will also provide the necessary introduction and training in FRP technology for those who are engaged in manufacture of FRP products but do not have formal training in FRP. The programme will also benefit the end users of FRP in understanding the technology, quality control and maintenance.

Science graduates who have necessary aptitude for engineering work will also find this programme useful for enriching their knowledge and skill to take up carrier in this field.

There is a general shortage of trained composites technologists in the industrial sector. There is no formal education programme in the country to train engineers specifically to this field of technology.

FRP Institute, therefore, strongly recommends to the composites industry to depute newly recruited engineers to get trained. This will certainly improve their capability which will in turn help to improve product quality and profitability of the industry.