Corrosion Body of Knowledge

Module 1: General Composites Knowledge (5%)

1. History and understanding of the composites industry
2. Understand why composites are unique
3. Basic knowledge of the advantages of composites

Module 2: Composites Manufacturing Processes (10%)

1. Open Molding processes
2. Closed Molding processes
3. Manufacturing Process recognition

Module 3: Composite Materials (15%)

1. Recognize the basic thermoset resins used in composites manufacturing
2. Identify and define resins used in corrosion-resistant products
3. Reinforcements and understanding their relationship in a composite part
4. Understand the importance of sandwich construction in composites manufacturing
5. Identify the fillers and additives used in resins

Module 4: Gel Coat Application (15%)

1. Concepts and technics critical to the application of gelcoat
2. Basic understanding of Gelcoat Chemistry
3. Procedures for handling gel coats
4. Familiarity with the various types of gel coat application equipment

Module 5: Molding Laminating Techniques (15%)

1. Purpose of the corrosion barrier and the structural laminate layer
2. Methods used when processing synthetic veils
3. Identify the factors to consider when applying structural portion of laminate
4. Filament winding, technics and processes commonly used for corrosion applications
5. Guidelines for processing core materials within specifications for corrosion applications
6. Common problem identification when using resins
7. Understand the process when joining parts during secondary bonding. Meeting the requirements for corrosion applications

Module 6: Controlled Spraying (15%)

1. Controlled spraying application process
2. Terminology and equipment recognition for spray applications and its various options
3. Comprehend and apply "Controlled Spraying Performance Evaluation"
   Know the major benefits for controlled spraying

Module 7: Composites Plant Safety (15%)
1. Identify and select plural component application equipment used in the FRP industry 2. Learn the importance of clean, dry compressed air in a shop 3. Understand and implement general equipment operating procedures 4. Show knowledge of the importance of Plural Component Equipment Calibration
Module 8: Corrosion Quality Assurance (10%)
1. Develop a basic knowledge and ability to implement safety practices as related to the composites industry 2. Know the steps involved in building a quality system 3. Basic principles in Procedural Process Control 4. Factors to ensuring quality specific to the corrosion industry and applicable standards 5. Principles to assuring quality in raw materials