

COURSE OVERVIEW HE1821

Professional Process Safety Inspector (PPSI)
Module 2: Process Safety Management (PSM) & Regulatory Framework

Course Title

Professional Process Safety Inspector (PPSI):
 Module 2: Process Safety Management (PSM)
 & Regulatory Framework

Course Date/Venue

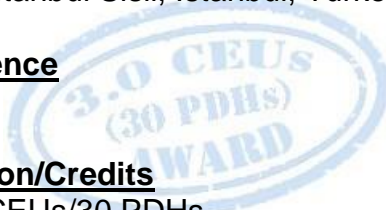
September 08-12, 2024/Meclis 1 Meeting
 Room, Divan Istanbul Sisli, Istanbul, Turkey

Course Reference

HE1821

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

This certification program is designed to train delegates on Process Safety Inspection and certify them as Professional Process Safety Inspectors. The program comprises of 4 modules that shall be taken in order:-



Module 1: Fundamentals of Process Safety

Module 2: Process Safety Management (PSM) & Regulatory Framework

Module 3: Human Factors & Cultural Aspects

Module 4: Process Safety Auditing & Site Inspection



Module 2 of this program is designed to provide participants with a detailed and up-to-date overview of Process Safety Management (PSM) & Regulatory Framework. It covers the 14 PSM elements and the process safety information (PSI) essentials; the process hazard analysis (PHA) methodologies; developing and implementing operating procedures; the contractor safety management, the importance of emergency planning and developing emergency response plans; coordinating with external agencies; and the crisis communication and global regulatory landscape in process safety.

During this interactive course, participants will learn the role of agencies like OSHA, EPA, etc and the key standards and guidelines (e.g., NFPA, CCPS); the differences between occupational safety and process safety regulations; the importance of compliance and enforcement; the need for incident investigations and root cause analysis methodologies; the effective reporting techniques and management of change; the process safety audits, effective auditing techniques and tracking and closure of audit findings; and the KPIs and performance metrics in process safety including continuous improvement models.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Complete Module 2 of the “*Professional Process Safety Inspector*” program is your successful road for this prestigious professional certification
- Identify the 14 PSM elements and employee participation in PSM
- Discuss process safety information (PSI) essentials and apply process hazard analysis (PHA) methodologies
- Develop and implement operating procedures and carryout contractor safety management
- Explain the importance of emergency planning, develop emergency response plans and coordinate with external agencies
- Apply drills, simulations and training as well as crisis communication
- Identify the global regulatory landscape in process safety and the role of agencies like OSHA, EPA, etc.
- Review the key standards and guidelines (e.g., NFPA, CCPS) and the differences between occupational safety and process safety regulations
- Discuss the importance of compliance and enforcement and the need for incident investigations
- Carryout root cause analysis methodologies, effective reporting techniques and management of change
- Employ process safety audits, effective auditing techniques and tracking and closure of audit findings
- Apply KPIs and performance metrics in process safety including continuous improvement models

Who Should Attend

This course provides an overview of all significant aspects and considerations of process safety management (PSM) and regulatory framework for site inspectors, safety engineers, supervisors, newly appointed managers, junior managers, safety representatives and newly qualified health and safety advisors within the process industries.

Course Prerequisite

This course has the following minimum prerequisites:-

- Certificate or proof of attendance/completion of Haward’s HE1820: Professional Process Safety Inspector (PPSI): Module 1: Fundamentals of Process Safety Course.

Course Certificate(s)

(1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Certificates are valid for 5 years.

Recertification is FOC for a Lifetime.

Sample of Certificates

The following are samples of the certificates that will be awarded to course participants:-



- (2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course.

* Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology *



Haward Technology Middle East
Continuing Professional Development (HTME-CPD)

CEUs

CEU Official Transcript of Records

TOR Issuance Date: 14-Nov-22
HTME No. 74851
Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE1820	Professional Process Safety Inspector: Module 1: Fundamentals of Process Safety	October 02-06, 2022	30	3.0
HE1821	Professional Process Safety Inspector: Module 2: Process Safety Management (PSM) & Regulatory Framework	October 23-27, 2022	30	3.0

Total No. of CEU's Earned as of TOR Issuance Date **6.0**

TRUE COPY

Jaryl Castillo
 Academic Director

Haward Technology has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2013 Standard which is widely recognized as the standard of good practice internationally. As a result of their Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for programs that qualify under the ANSI/IACET 1-2013 Standard.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking Continuing Education Units (CEUs) in accordance with the rules & regulations of the International Association for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology is accredited by










P.O. Box 26070, Abu Dhabi, United Arab Emirates | Tel.: +971 2 3091 714 | E-mail: info@haward.org | Website: www.haward.org

* Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology *

Certificate Accreditations


Certificates are accredited by the following international accreditation organizations:-

- 
The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

Course Fee

US\$ 6,000 per Delegate + **VAT**. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. Andrew Ladwig is a **Senior Health, Safety & Environmental (HSE) Consultant** with over **25 years** of extensive experience within the **Oil & Gas, Refinery, Petrochemical & Power** industries. His expertise widely covers in the areas of Certified Environmental Manager (**CEM**), Environmental Management & Technology (**EMT**), **Environmental Management System**, Environmental Impact Assessment (**EIA**), **Environmental Monitoring & Modelling**, **Environmental Awareness** in Industrial Plant, **Environmental Pollution & Control** in Oil Industry, **Environmental Enforcement & Compliance**, Waste Management & Environmental Protection, Environmental **Emergency Plan**, **Environmental Policy Analysis**, Health & **Environment Hazards**, **Environmental Emission Control**, **Environmental Incident Investigation & Root Cause Analysis**, **Hazardous Materials & Chemicals** Handling, Hazardous Materials (**HAZMAT**), Hazard Identification & Operability (**HAZOP**), **Process Hazard Analysis (PHA)**, Process Safety Management (**PSM**), Behavioural Based Safety (**BBS**), Authorized Gas Tester (**AGT**), **Confined Space Entry & Rescue**, Pre-Startup Safety Reviews (**PSSR**), **Risk Assessment**, **Risk Management**, Permit to Work (**PTW**), **Lock Out/Tag Out** Permit to Work Systems, Data Analysis, Sampling & Analysis, Job Safety Analysis (**JSA**), **Hazardous Material Classification & Storage/Disposal**, **Risk Monitoring**, Authorized Gas Tester (**AGT**), **Working at Heights**, **H₂S**, **Emergency Planning**, **Emergency Response & Crisis** Management Operations, **Waste Management** Monitoring, Personal Protective Equipment (**PPE**), **Gas Testing & Energy Isolations**, **Fire & Gas**, **PTW & Gas Tester**, **Basic Fire Fighting**, **Fire Protection**, **Fire Extinguisher Service & Maintenance**, **First Aid**, **Near Miss Reporting** Best Practices, **Dangerous Goods** and Occupational Health & Safety. Further, he is well versed in **Ammonia Plant Safety**, **Ammonia Recovery**, Hazard of **Ammonia Handling**, Storage & Shipping, **Sulphur Recovery**, **Phenol Recovery & Extraction**, **Wax Sweating & Blending**, **Wax Molding/Slabbing**, **Wax Bleachers**, **Extractors**, **Coal Processing**, **Water Purification**, Gasification, Distillation, Fractionation, **Industrial Drying**, Principles, Selection & Design, **Steam Trapping & Control**, **Column, Pump & Exchangers**, Troubleshooting & Design, Rotating Equipment Operation & Troubleshooting, **Control & ESD System** and **Production Optimization**.

During his career life, Mr. Ladwig has gained his practical experience through his various significant positions and dedication as the **Senior HSE Manager**, **Warehouse Manager**, **Quality Manager**, **Business Analyst**, **Senior HSE Engineer**, **Process Engineer**, **HSE Supervisor**, **Senior HSE Specialist**, **HSE Officer**, **Senior Process Controller**, **Process Controller**, **Safety Officer**, **Senior Lecturer**, **Senior HSE Consultant** and **Senior Consultant/Trainer** for various companies such as the Sasol Ltd., Sasol Wax, Sasol Synfuels, just to name a few.

Mr. Ladwig is a **Registered SAQA Qualification (NQF Level 4)** in **Chemical Operations**. Further, he is a **Certified Multi-Skilled** in **Instrumentation** and **Mechanical**, a **Certified Instructor/Trainer** and has delivered various trainings, workshops, seminars, courses and conferences internationally.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday, 08th of September 2024

0730 – 0800	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0815 – 0930	Overview of the 14 PSM Elements
0930 – 0945	<i>Break</i>
0945 – 1030	Employee Participation in PSM
1030 – 1130	Process Safety Information (PSI) Essentials
1130 – 1230	Process Hazard Analysis (PHA) Methodologies
1230 – 1245	<i>Break</i>
1245 – 1315	Developing & Implementing Operating Procedures
1315 – 1420	Contractor Safety Management
1420 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2: Monday, 09th of September 2024

0730 – 0930	Importance of Emergency Planning
0930 – 0945	<i>Break</i>
0945 – 1030	Development of Emergency Response Plans
1030 – 1130	Coordination with External Agencies
1130 – 1230	Drills, Simulations & Training
1230 – 1245	<i>Break</i>
1245 – 1315	Crisis Communication
1315 – 1420	Case Study: Flixborough Disaster & Its Aftermath
1420 – 1430	Recap
1430	<i>Lunch & End of Day Two</i>

Day 3: Tuesday, 10th of September 2024

0730 – 0930	Global Regulatory Landscape in Process Safety
0930 – 0945	<i>Break</i>
0945 – 1030	Role of Agencies Like OSHA, EPA, Etc.
1030 – 1130	Key Standards & Guidelines (e.g., NFPA, CCPS)
1130 – 1230	Differences Between Occupational Safety & Process Safety Regulations

1230 – 1245	<i>Break</i>
1245 – 1315	<i>Importance of Compliance & Enforcement</i>
1315 – 1420	<i>Case Study: Deepwater Horizon & Regulatory Responses</i>
1420 – 1430	<i>Recap</i>
1430	<i>Lunch & End of Day Three</i>

Day 4: Wednesday, 11th of September 2024

0730 – 0930	<i>The Need for Incident Investigations</i>
0930 – 0945	<i>Break</i>
0945 – 1030	<i>Root Cause Analysis Methodologies</i>
1030 – 1130	<i>Effective Reporting Techniques</i>
1130 – 1230	<i>Lessons Learned & Knowledge Sharing</i>
1230 – 1245	<i>Break</i>
1245 – 1315	<i>Management of Change & Its Significance</i>
1315 – 1420	<i>Workshop: Root Cause Analysis of a Mock Incident</i>
1420 – 1430	<i>Recap</i>
1430	<i>Lunch & End of Day Four</i>

Day 5: Thursday, 12th of September 2024

0730 – 0830	<i>Introduction to Process Safety Audits</i>
0830 – 0930	<i>Effective Auditing Techniques</i>
0930 – 0945	<i>Break</i>
0945 – 1030	<i>Tracking & Closure of Audit Findings</i>
1030 – 1115	<i>KPIs & Performance Metrics in Process Safety</i>
1115 – 1200	<i>Continuous Improvement Models</i>
1200 – 1215	<i>Break</i>
1215 – 1300	<i>Group Discussion: Challenges & Best Practices in PSM</i>
1300 – 1315	<i>Course Conclusion</i>
1315 – 1415	<i>COMPETENCY EXAM - Module 2</i>
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>

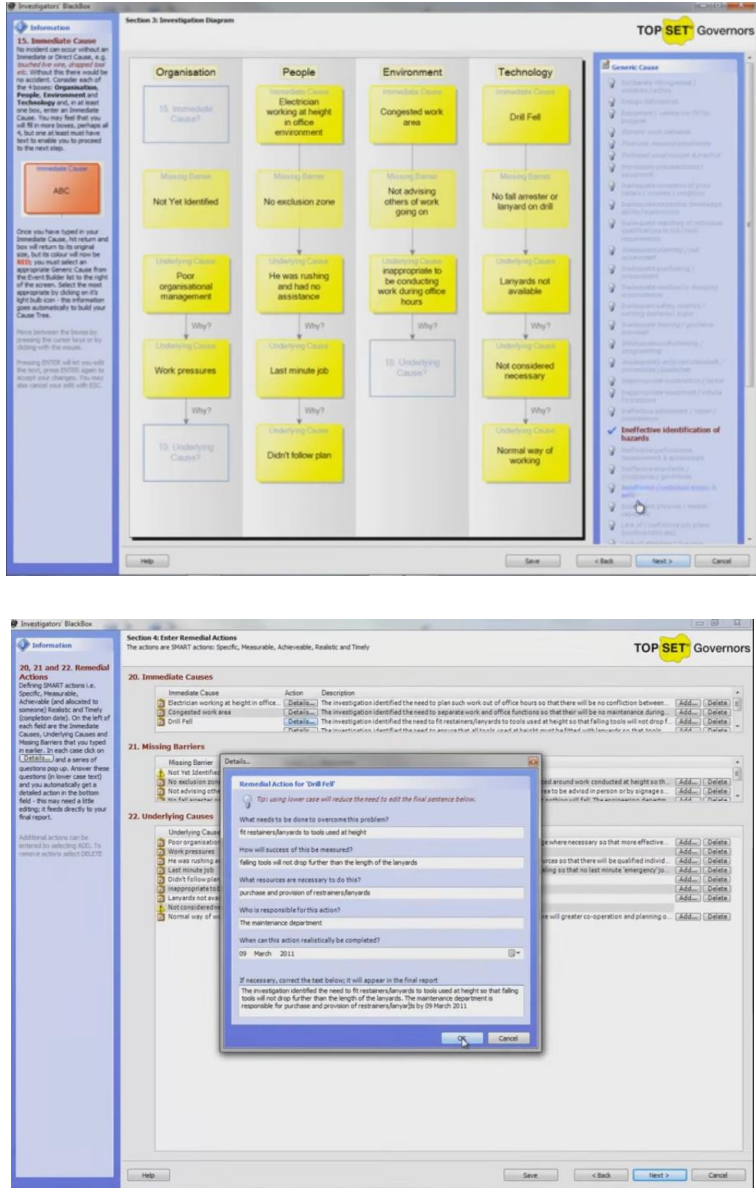
Simulators (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using one of our state-of-the-art “CAMEO Chemicals Suite Simulator”, “BlackBox Simulator”; “Chemical Compatibility 1.1 Simulator” and “Chemical Safety Database Simulator”.



The screenshot shows the CAMEO Chemicals Suite Simulator interface. The title is "CAMEO Chemicals" and the subtitle is "Database of Hazardous Materials". The interface is divided into a left sidebar and a main content area. The sidebar contains links for "Home", "Help", "Search Chemicals", "New Search", "MyChemicals", "chemicals: 0", "View MyChemicals", and "Predict Reactivity". The main content area has three sections: "Search" (with a magnifying glass icon) describing a database of hazardous materials; "MyChemicals" (with a flask icon) for building a list of chemicals; and "Reactivity" (with a flask icon) for predicting hazards from mixed chemicals.

CAMEO Chemicals Suite Simulator



Section 3: Investigation Diagram

TOP SET Governors

13. Immediate Cause

The incident can occur without an Immediate or Direct Cause, e.g. a teacher for who, although not an employee, there would be no accident, complete with the 4 boxes: Organisation, People, Environmental and Technology and, in at least one box, enter an Immediate Cause. This may feel that you will fill in too many boxes, perhaps all 4, but one at least must have had to enable you to proceed to the next step.

Immediate Cause

ABC

Choose you have typed in your Immediate Cause. No return and keys will return to its original state. But either will be the REDS, you must select an appropriate Generic Cause from the Event Builder list to the right of the screen. Select the most appropriate by clicking on its right hand icon - the information gets automatically to build your Cause Tree.

None between the boxes by pressing the cursor keys or by clicking with the mouse.

Pressing CTRL+Z will set you with the last saved version. You may also cancel your work with ESC.

Section 4: Enter Remedial Actions

The actions are SMART actions: Specific, Measurable, Achievable, Realistic and Timely

20. Immediate Causes

Immediate Cause	Action	Description
Electrician working at height in office	...	The investigation identified the need to plan such work out of office hours so that there will be no conflict between...
Congested work area	...	The investigation identified the need to separate work and office functions so that there will be no maintenance during...
Drill Fell	...	The investigation identified the need to fit restrainers/lanyards to tools used at height so that falling tools will not drop...

21. Missing Barriers

22. Underlying Causes

Remedial Action for 'Drill Fell'

What needs to be done to overcome this problem?

Restrainers/lanyards to tools used at height

How will access of this be measured?

Falling tools will not drop further than the length of the lanyards

What resources are necessary to do this?

purchase and provision of restrainers/lanyards

Who is responsible for this action?

The maintenance department

When can this action realistically be completed?

09 March 2011

If necessary, correct the text below it will appear in the final report

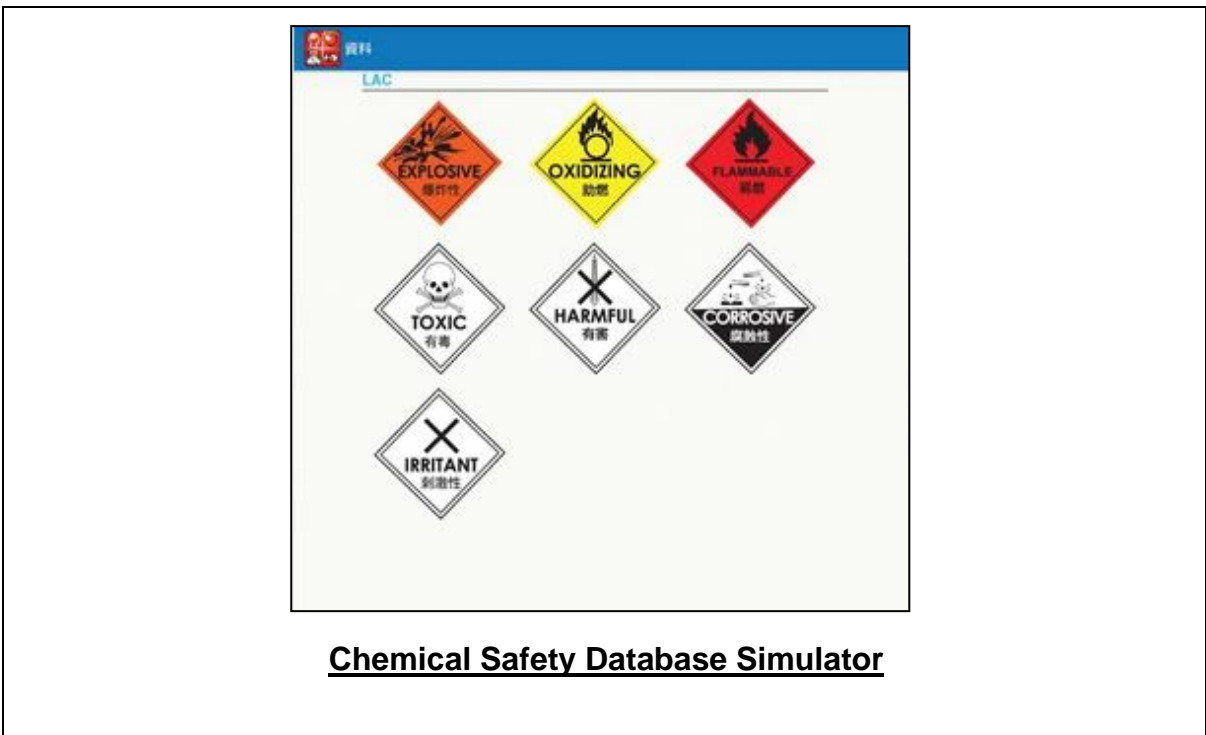
The investigation identified the need to fit restrainers/lanyards to tools used at height so that falling tools will not drop further than the length of the lanyards. The maintenance department is responsible for purchase and provision of restrainers/lanyards by 09 March 2011.

BlackBox Software Tool



Boric Acid Compatibilities	
Acetal (Delrin®)	Excellent
Plastics	
Aluminum	Severe Effect
Metals	
Bronze	
Metals	Good
Buna N (Nitrile)	
Elastomers	Excellent
Carbon graphite	
Non-metals	Excellent
Carbon Steel	
Metals	Severe Effect
Carpenter 20	
Metals	Good/2
Cast iron	
Metals	Severe Effect
Ceramic Al2O3	
Non-metals	Excellent
Ceramic magnet	
Non-metals	Excellent
ChemRaz (FFKM)	
Plastic	Excellent
Copper	
Metals	Good
CPVC	
Plastics	Excellent
EPDM	
Elastomers	Excellent

Chemical Compatibility 1.1 Simulator



Chemical Safety Database Simulator

Course Coordinator

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