

E-CERTIFIER: REVOLUTIONIZING OPERATOR TRAINING AND CERTIFICATION



Math Steps

AGENDA

01 INTRODUCTION

02 TRAINING METHODS

03 TECHNOLOGY TRAINING
SIMULATOR (TTS)

04 E-CERTIFIER

05 CONCLUSIONS

06 Q&A



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INTRODUCTION

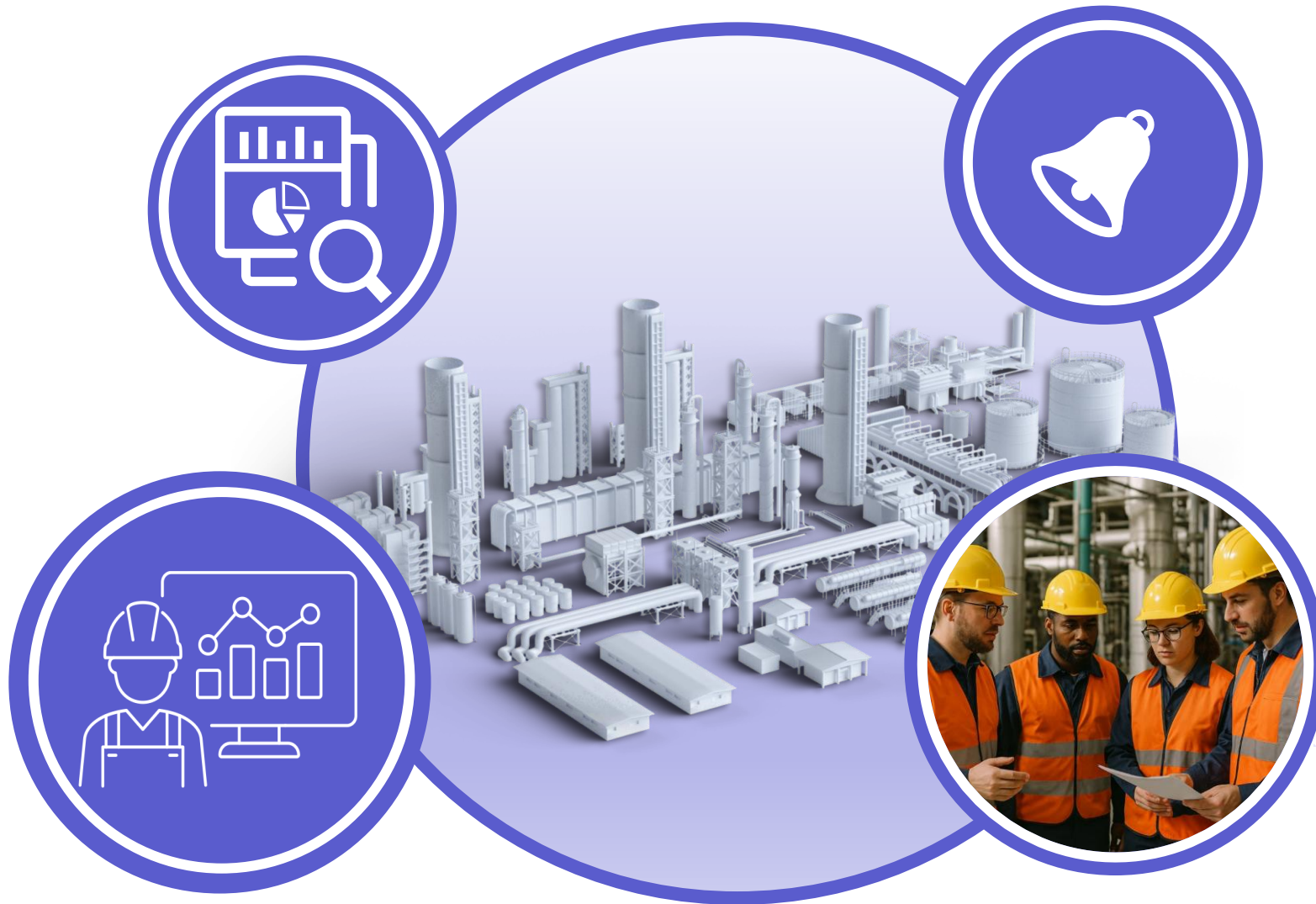


OPERATOR TRAINING IS A CORNERSTONE OF SAFETY AND EFFICIENCY IN FERTILIZER PRODUCTION

INTRODUCTION



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INTRODUCTION



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Toxic leaks



Explosions



Environmental
contamination

INTRODUCTION

110 REAL-WORLD INCIDENTS FROM UREA INDUSTRY WORLDWIDE.

Where:

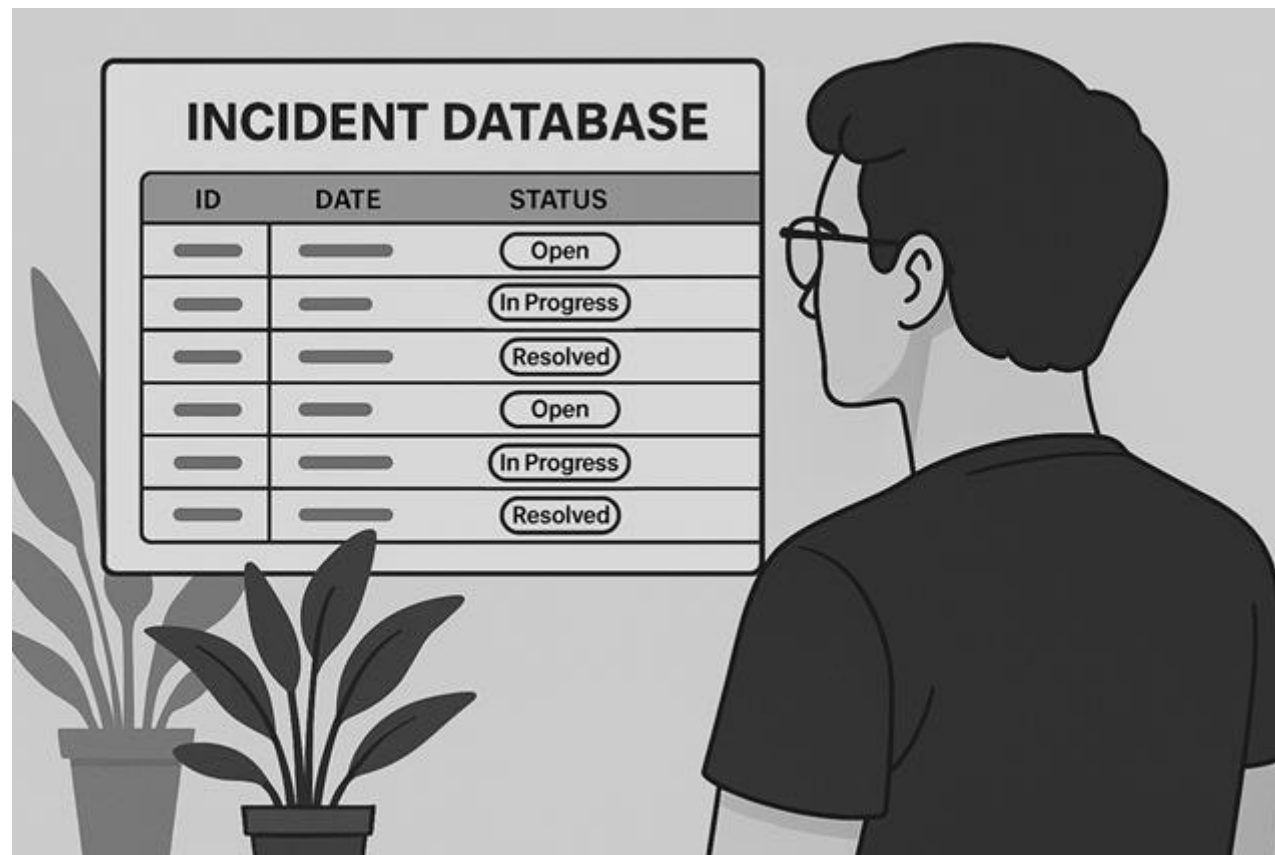
- 45% - synthesis section
- 26% - feed section
- 13% - recirculation section

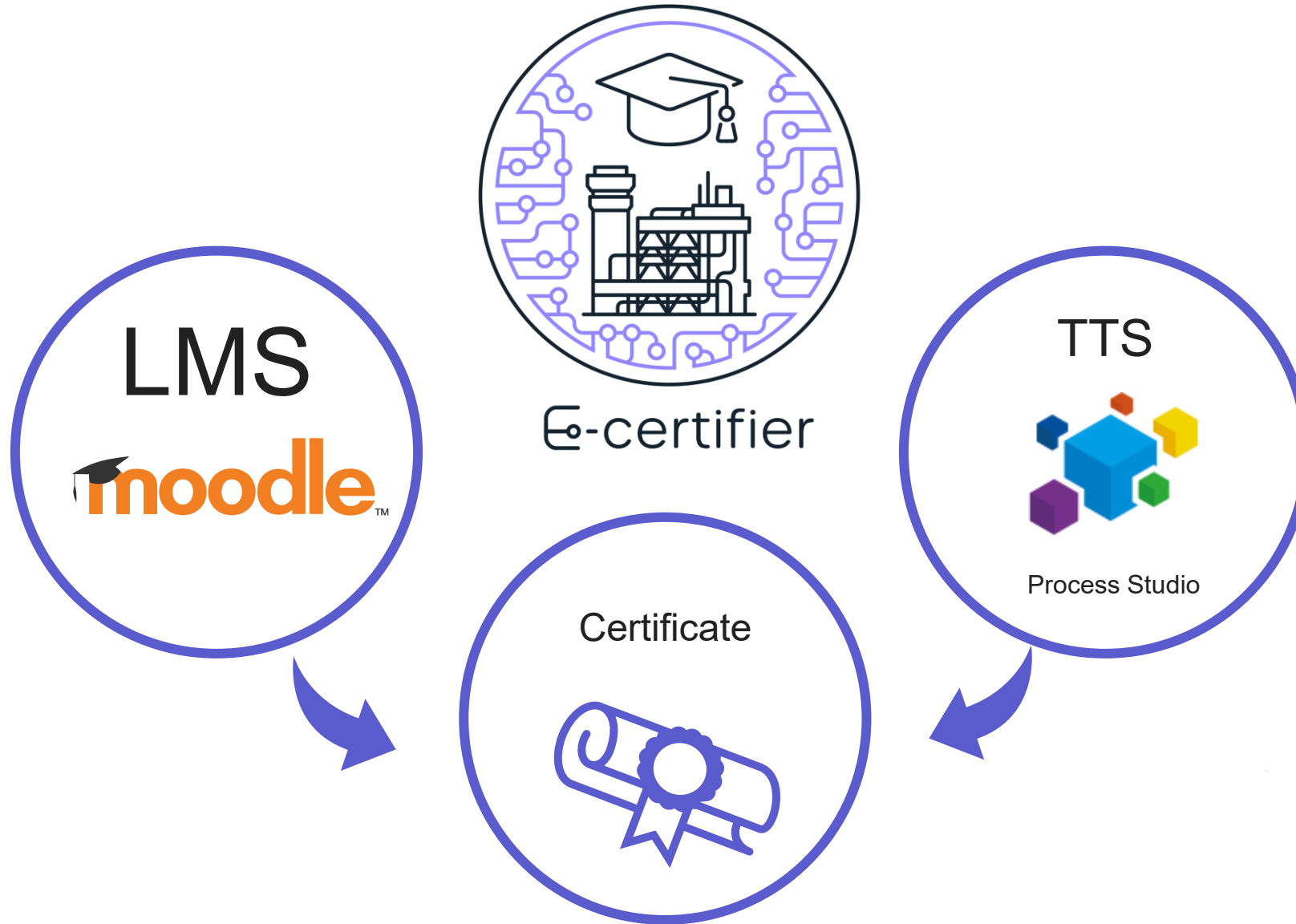
58% of these incidents:

Failures in operation and procedure.



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02



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TRAINING METHODS

CONVENTIONAL TRAINING METHODS



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Training in the field



Classroom training:

- Verbal instruction
- Theoretical knowledge
- Trained instructors

TECHNOLOGY TRAINING SIMULATOR (TTS)



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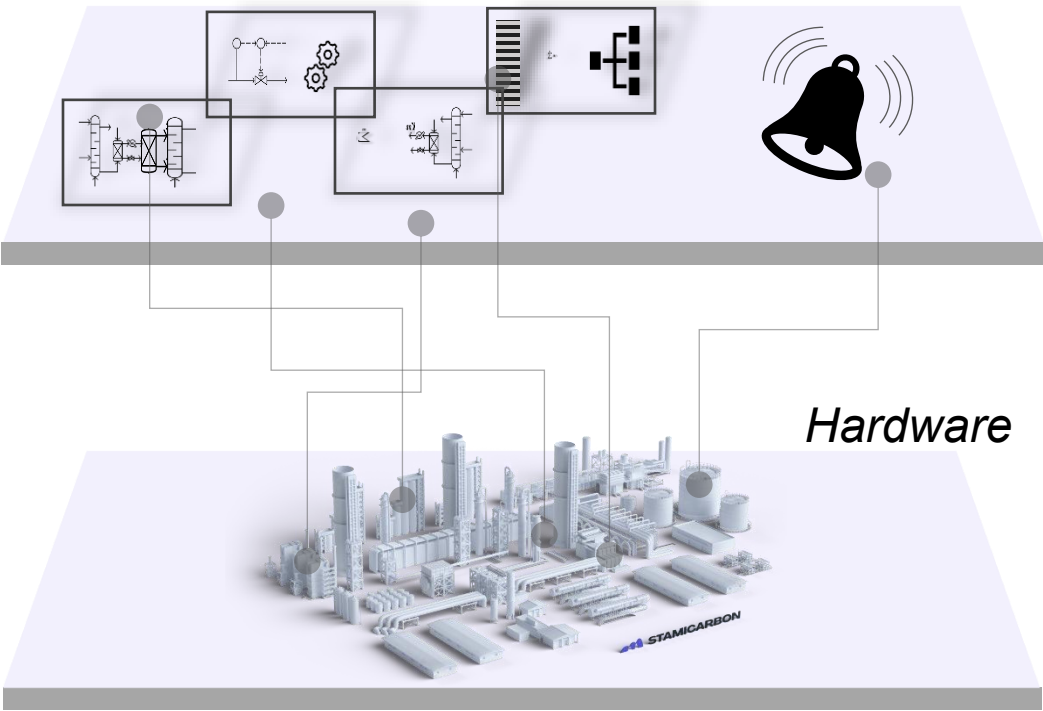
TECHNOLOGY TRAINING SIMULATOR (TTS)



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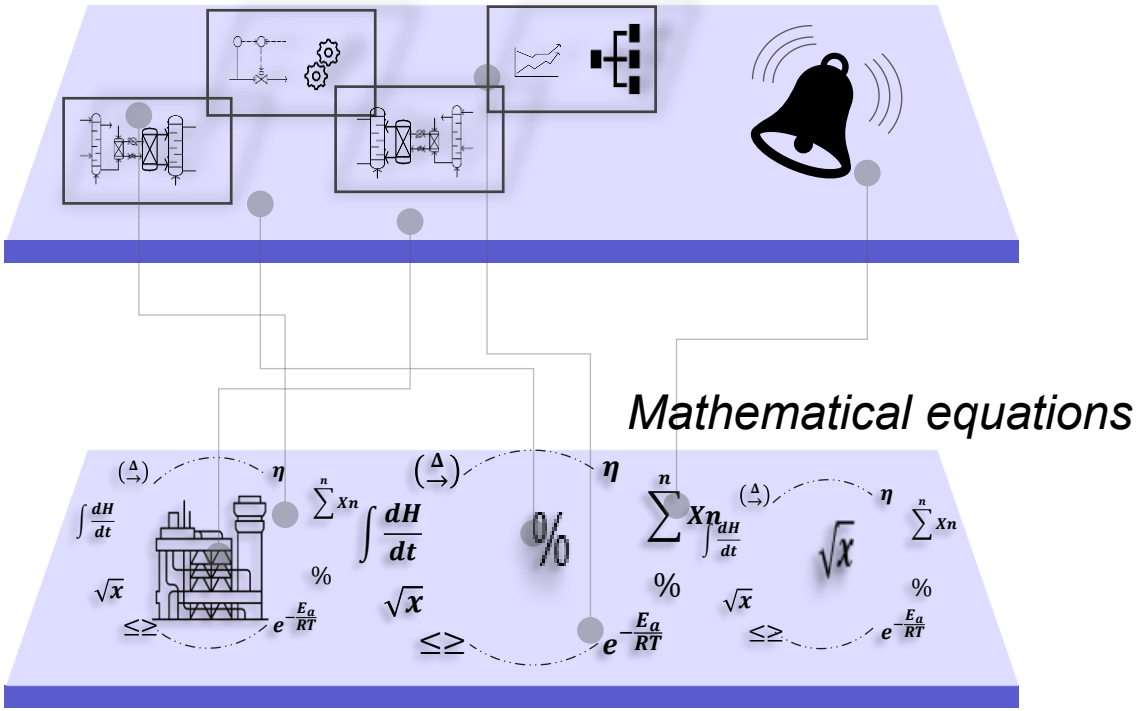
PLANT

DCS system



TTS

Emulated control and HMI



TECHNOLOGY TRAINING SIMULATOR (TTS)



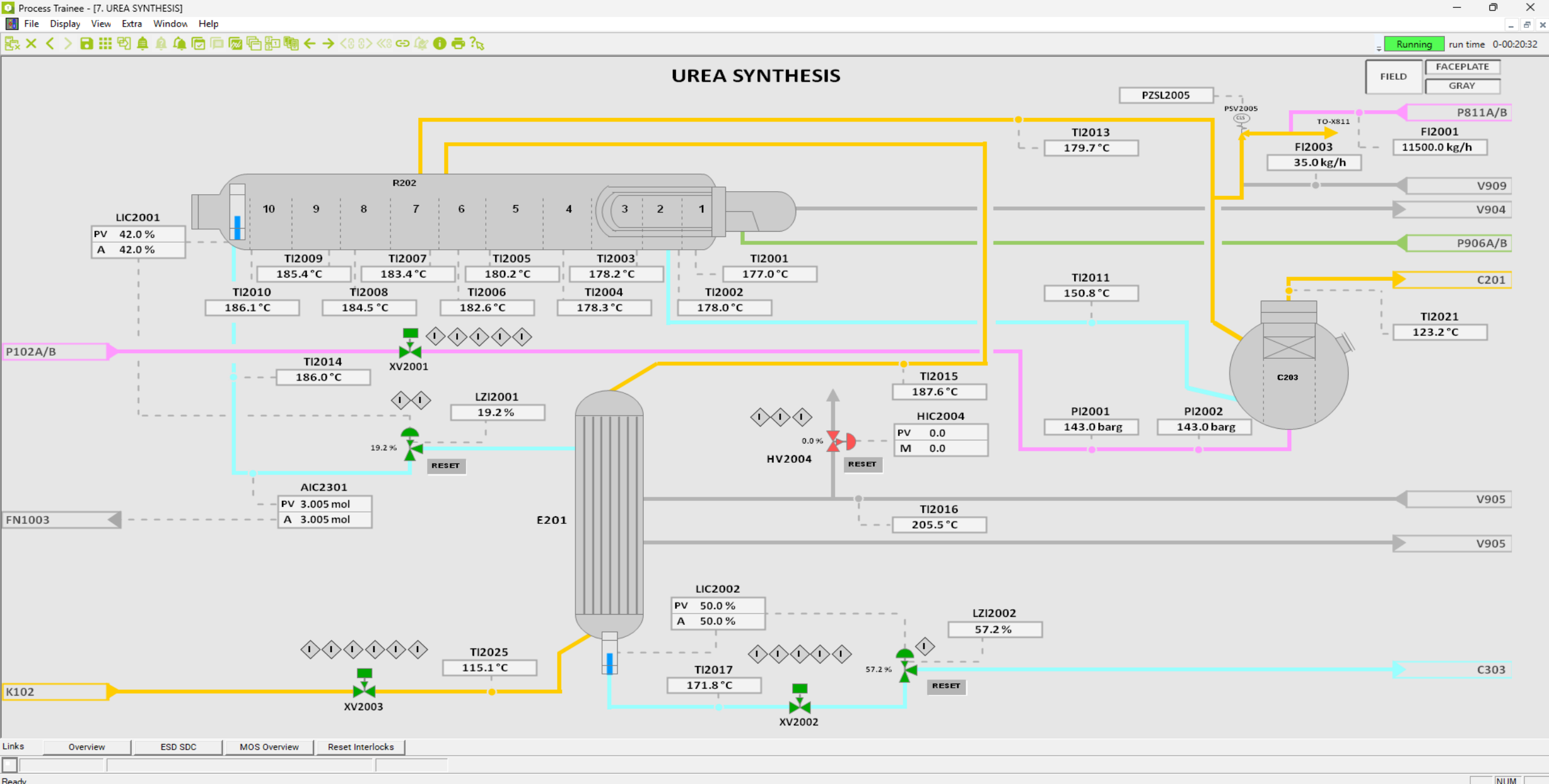
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THE TTS CAN BE USED TO TRAIN OPERATORS ON:

- Start-ups
- Shutdowns
- Load changes
- Infrequent scenarios
- Disturbances



Virtual plant
1:1 copy of your plant



TECHNOLOGY TRAINING SIMULATOR (TTS)

THE TTS CAN BE USED TO TRAIN OPERATORS ON:

- To rehearse start-up before starting up the plant after revamping, maintenance, or fully new build.
- TTS aids in keeping operator skills up to date.
- Knowledge transfer helps to cope with high operator turnover.
- The simulator is used to assess and train field operators that want to move to the control room.

03



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E-CERTIFIER





COURSE BUILD UP:

- LMS theory
- LMS examination theory
- TTS course
- TTS examination

Introduction to urea

This level aims to provide an understanding of the basics of urea, including its thermodynamics and kinetics, as well as high-level process descriptions of urea melt and granulation. The objective is to provide a:

Theoretical Examination

UREA F Quiz Settings Questions Results Question bank More

Global Tra

Back

Question 1
Not yet answered
Marked out of 1.00
Flag question
Edit question
v1 (latest)

15 STAMICARBON
6:09

Terug naar cursus

Process Trainee - [24. CARBAMATE PUMPS LUBE OIL SYS]

File Display View Extra Window Help

Running run time 0-00:00:50

CARBAMATE PUMPS LUBE OIL

Process Trainee - [24. CARBAMATE PUMPS LUBE OIL SYS]

File Display View Extra Window Help

Running run time 0-00:02:00

CARBAMATE PUMPS LUBE OIL

Question

What is the correct lube oil pressure to continue the start up?

☐ A. 0.5 Barg or higher
☐ B. 0.8 Barg or higher
☐ C. 1 Barg or higher
☐ D. 2 Barg or higher

OK Cancel



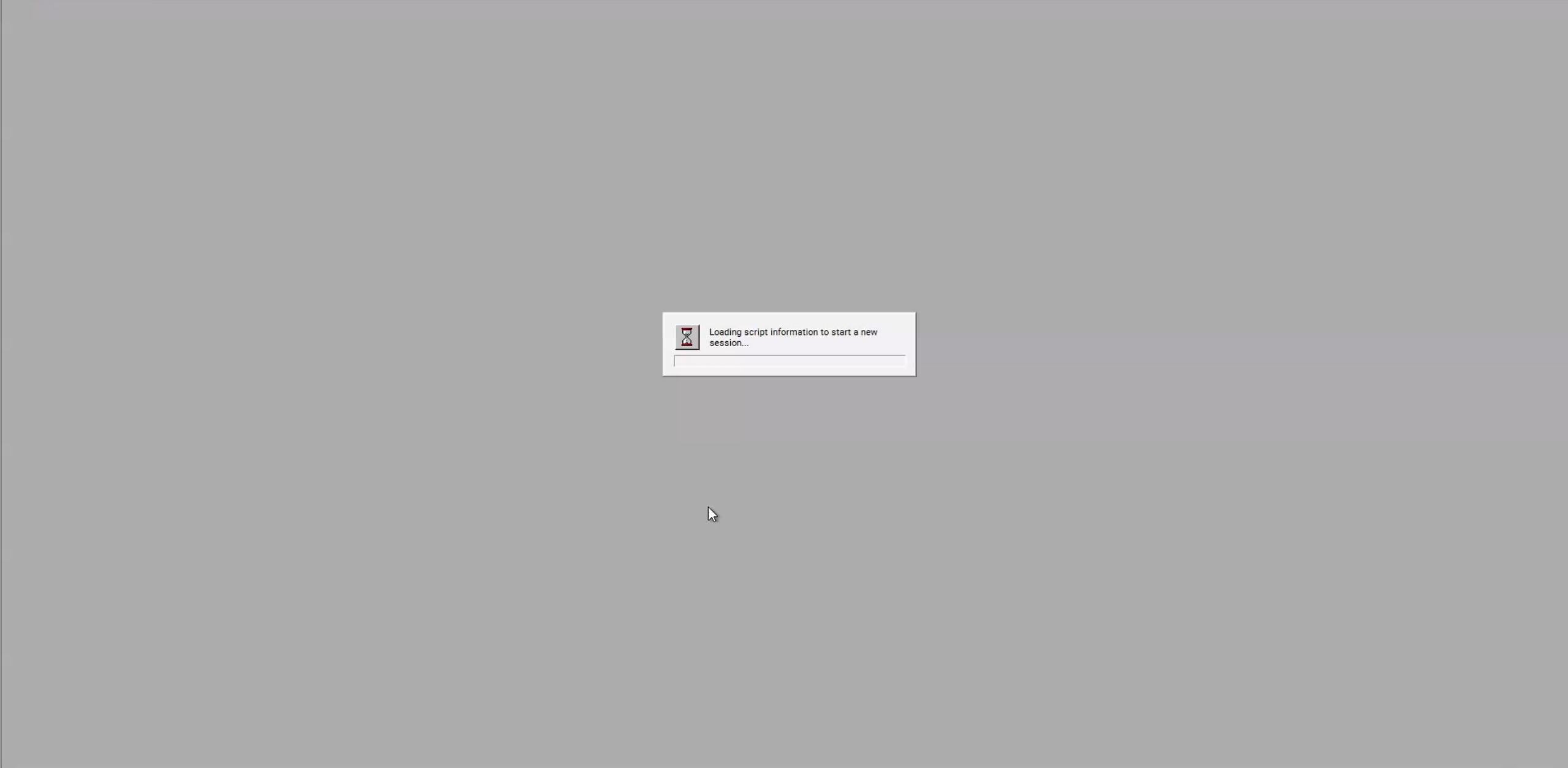
TTS COURSES DISTINGUISH BETWEEN TWO TYPES OF SESSIONS:


- Automated guided training
- Examinations





Example of a guided session





Loading script information to start a new session...



Example of a TTS Examination

Course: eCertifier Level 2 - Urea b: X

Cancel recording

https://training.stamicarbonacademy.com/course/view.php?id=189

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Gettling started

Introduction to urea

Theory

Theoretical Examination

OTS practice urea compositions

OTS Examination

Test 🔒

Urea melt technologies

Theory

Theoretical Examination

OTS Practice biuret forming

OTS Examination

Urea finishing technologies

Theory

Theoretical Examination

OTS Pump Switch over trainin...

OTS Examination

Course Certificate

Course certificate 🔒

✓ Done

OTS Pump Switch over training script

In this script you will learn how to switch over the carbamate pumps.

Currently the A pump is running. In this script you will learn to start the B pump, switch over and stop the A pump and visa versa. Based upon a procedure.

This script will guide you first trough the process of switching over from the A pump to the B pump. Later on in the script you will switch over again from the B pump to the A pump based upon instructions given by the script.

During the process you will get several quiz questions where you can earn points.

If you don't understand an instruction, don't panic the script will take over and guide you in to the right direction again. However, With every intrusion you will loose points.

Click the button below to start the Script.

Start Process Studio

OTS Examination

In this script you have to switch over the carbamate pumps.

Currently the A pump is running. What needs to be done is to start the B pump, switch over and stop the a pump based upon the procedure. Procedure can be found in in the bottom right corner of the DCS carbamate pump screen. Points will be added for following the correct procedure. Points will be deducted for any mishandling.

You will have 30 Min for this procedure. Succes!

Click the button below to start the exam.

Start Process Studio

Mark as done

i



The standard Urea based E-Certifier has 5 levels:

Level 1: Basics of TTS and DCS Operation

Level 2: Urea Basics and Process Description

Level 3: Urea Plant Sections (Part 1)

Level 4: Urea Plant Sections (Part 2)

Level 5: Urea Plant Advanced Course

The content mentioned above can be customized according to the customer's needs and requirements.



CONCLUSIONS

CONCLUSIONS

E-CERTIFIER TRAINING PROVIDES SEVERAL SIGNIFICANT ADVANTAGES:

- A flexible training environment that allows trainees to train according to their individual situation, regardless of location.
- Interactive and engaging content provided by e-Certifier.
- The ability for instructors to monitor trainees' progress and generate reports on their development.
- Enhancement of operators' skills through e-Certifier, resulting in reduced risk and plant downtime.
- Transfer of licensor knowledge.



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THANK YOU



QUESTIONS?