



CEPSA TURNAROUND METHODOLOGY 4.0

ERTC VIRTUAL 2020

Speaker: Jose A. Martínez Villa.

Email: Jose.martinezv@cepsa.com

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I'M SPEAKING AT
ERTC VIRTUAL
2020

#ERTC2020

CEPSA



ITEMS: 15.558 U

STATICS: 7.249

DYNAMICS: 4.688

PACK UNITS: 529

ELECTRICALSS: 3.047





FEED:

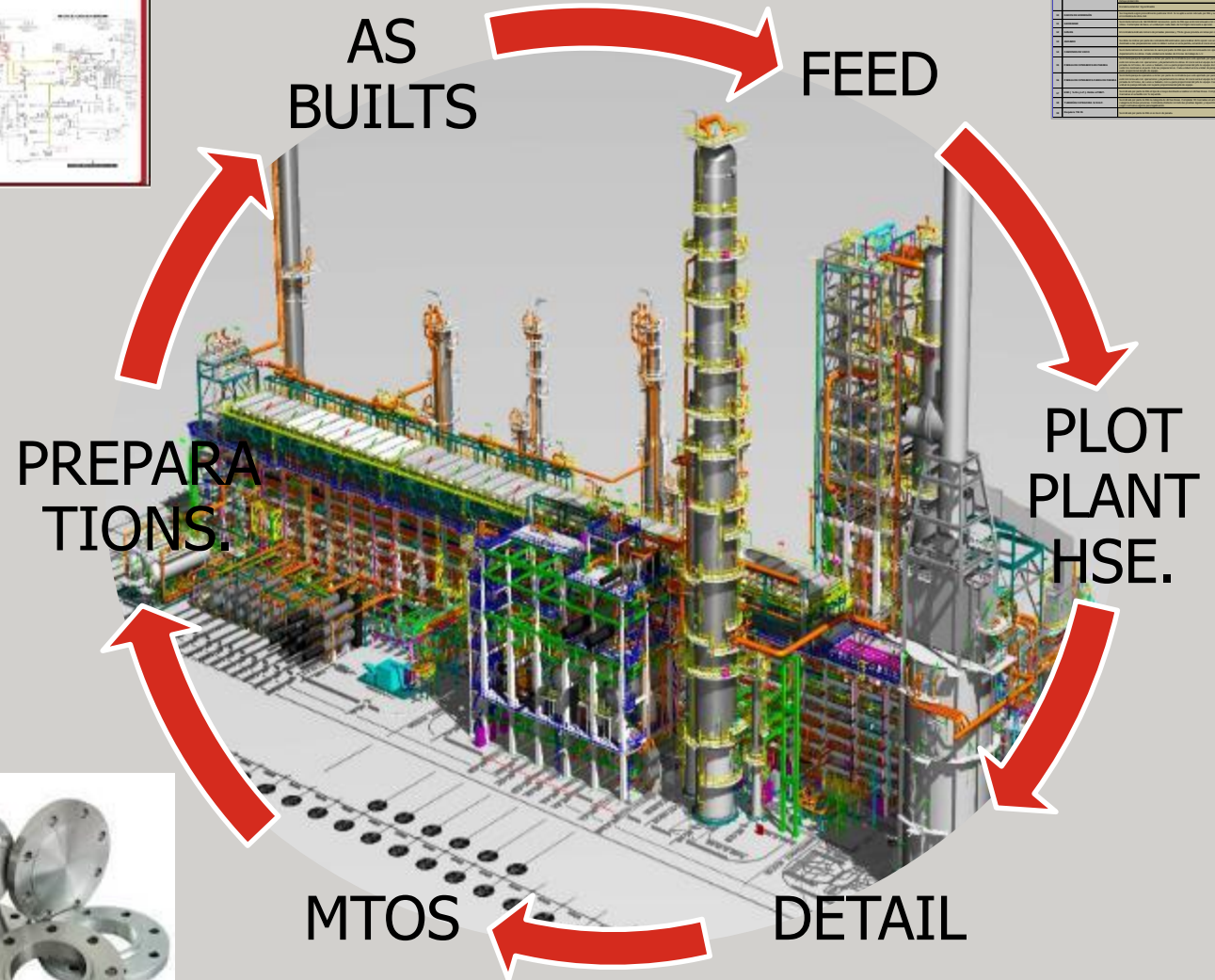
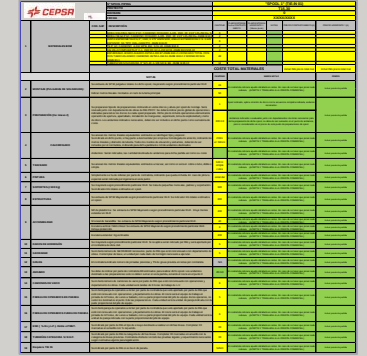
PLOT PLANT / HSE:

DETAILS ENGINEERING:

MTOS

PREPARATIONS

AS BUILT

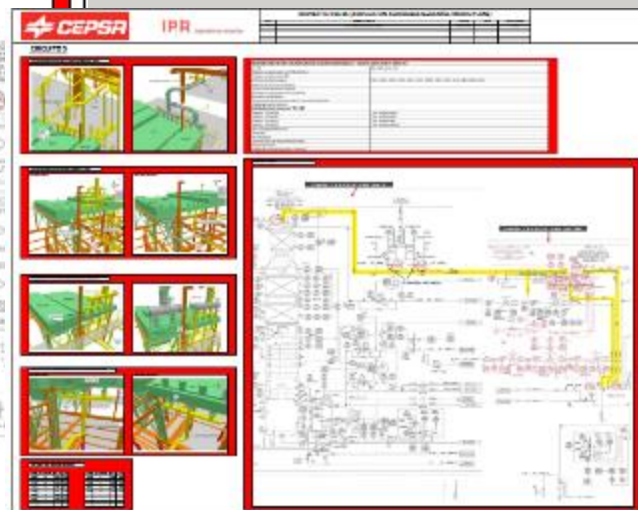
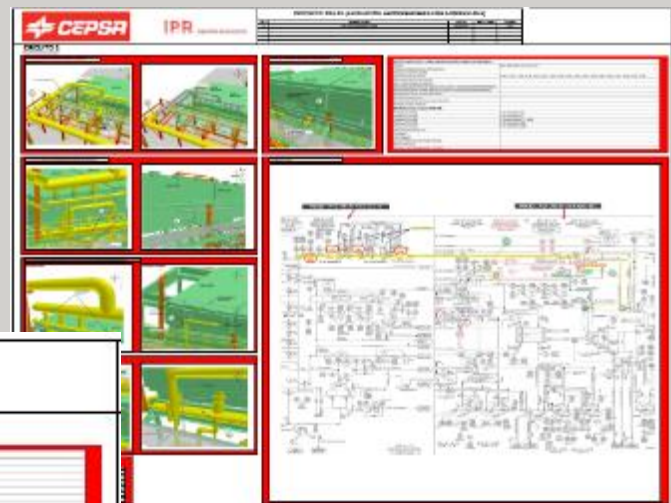
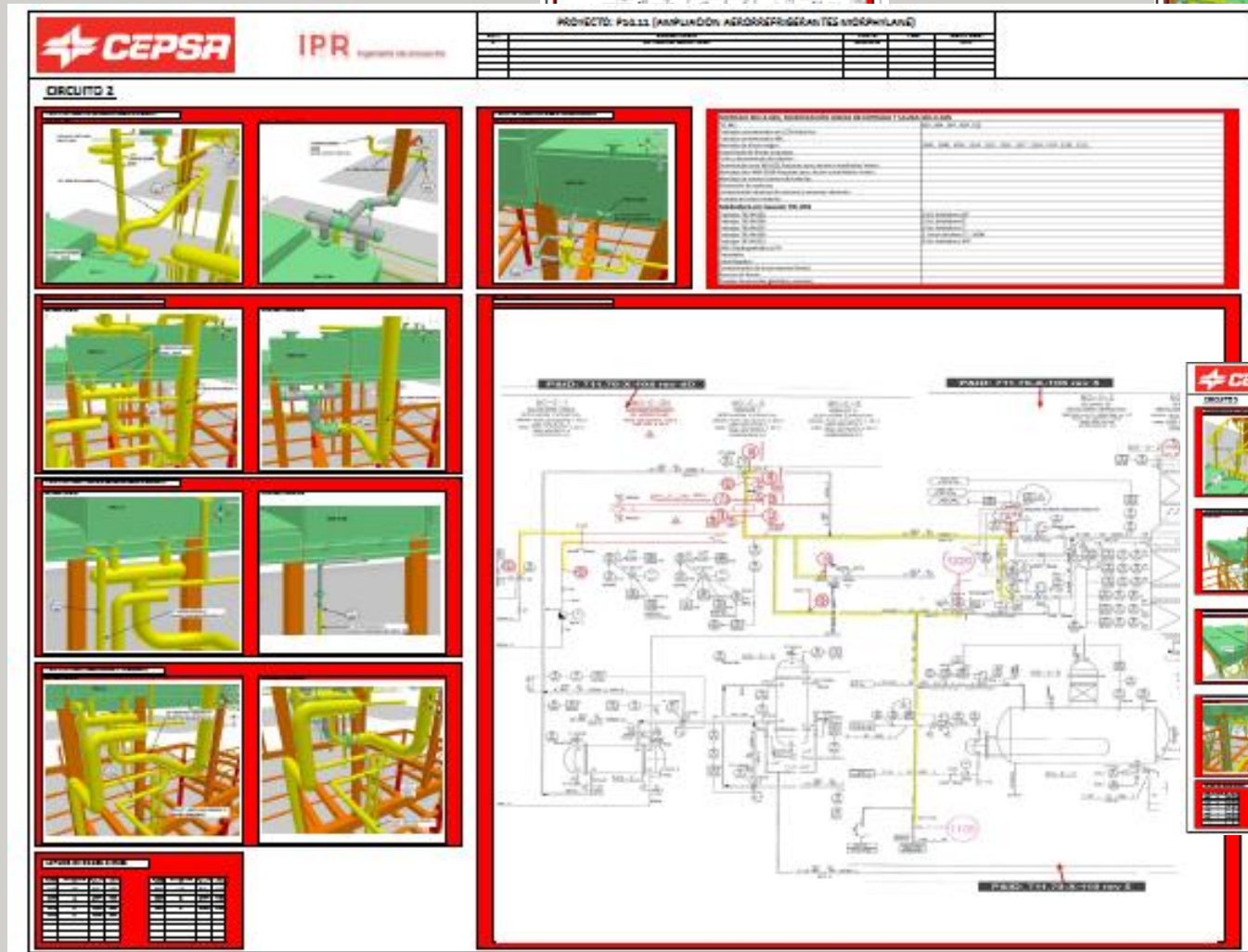




CEPSA TURNAROUND METHODOLOGY 4.0

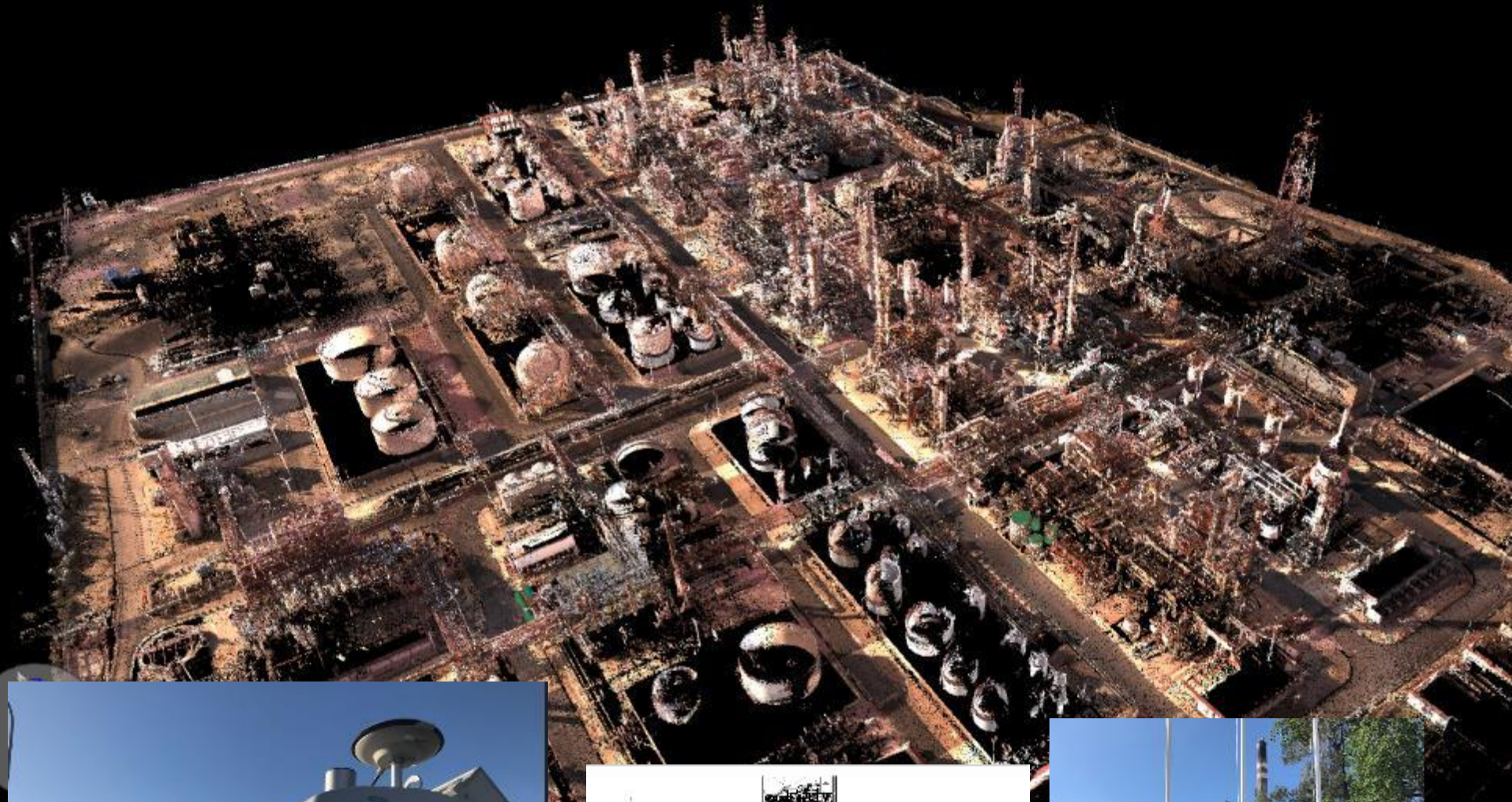
CYCLE 3D DESIGN.

PREPARATION DIAGRAMS





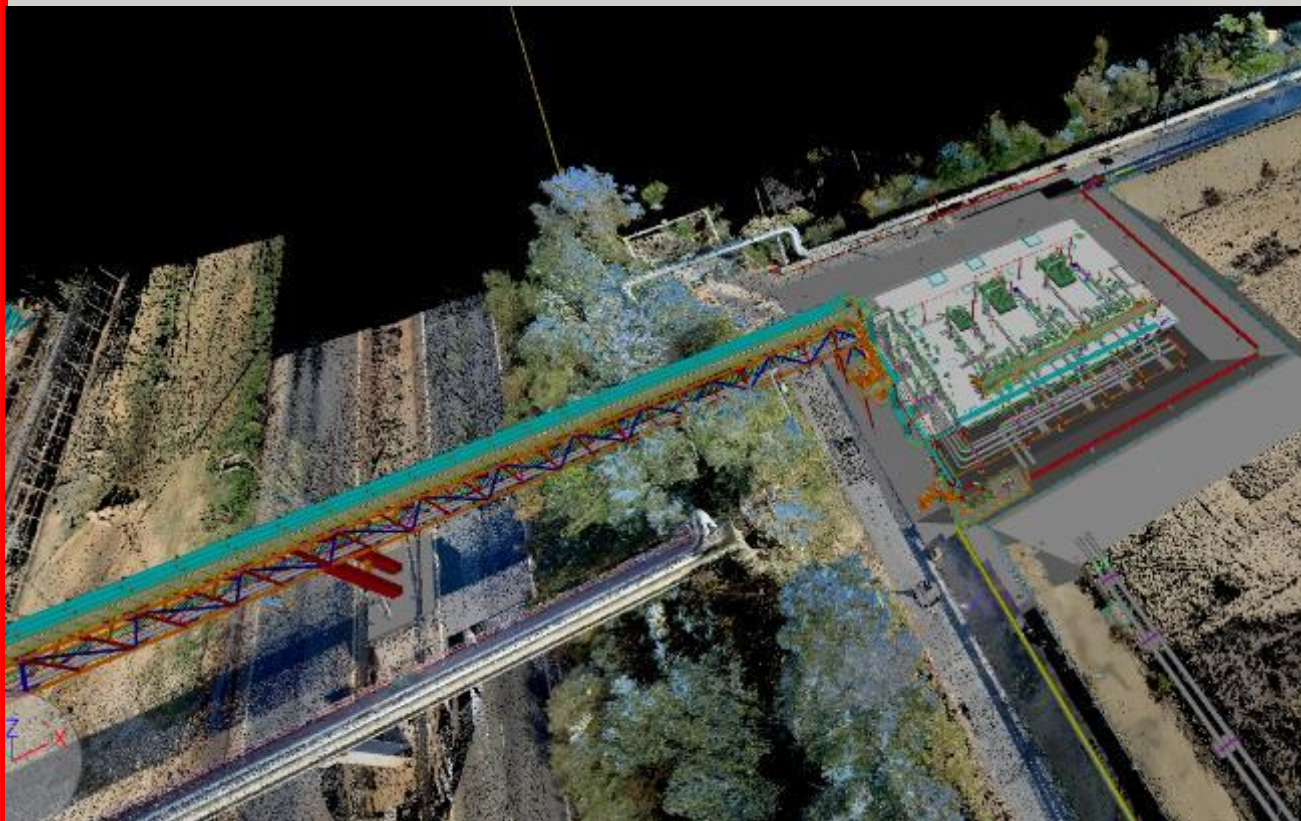
MOBIL MAPPING.





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DESIGN





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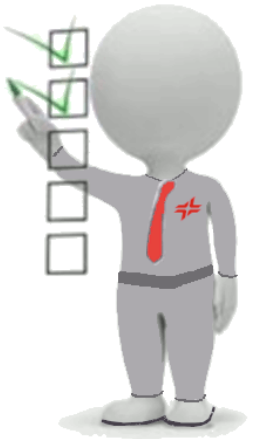
CASES STUDY

P14.11 NEWS BUNDLES MO.

N15.18 COOLER NK-E4 HK.

N16.02 NEW BUNDLES HK.

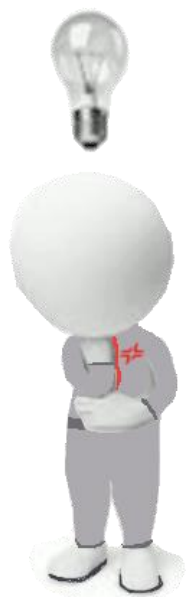
T16.01. WHITE PRODUCTS.





CASES STUDY

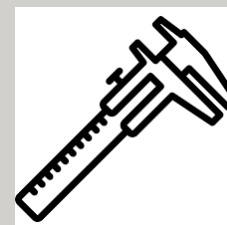
P14.11 NEWS BUNDLES MO.



SCOPE

4 NEW BUNDLES.
2 INSPECTION BUNDLES.
AIR BLOCK COMPLETE CHANGE.

RISKS



STANDART TIME

10 days
240 hours

**DEADLINE NEW
ITEMS IN MIDDLE
OF TURNAROUND.**



CASES STUDY

P14.11 NEWS BUNDLES MO.

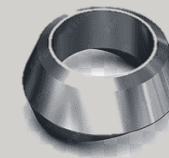
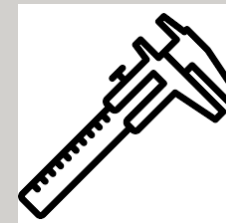


SCOPE

REVERSE ENGINEERING.

4 NEW BUNDLES.
2 INSPECTION BUNDLES.
AIR BLOCK COMPLETE CHANGE

RISKS



GOAL

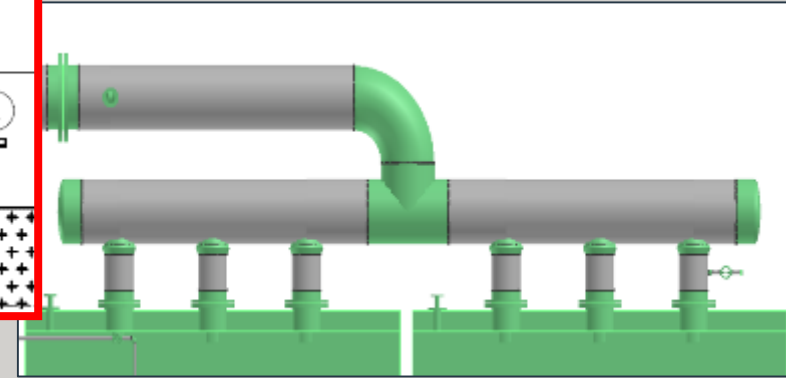
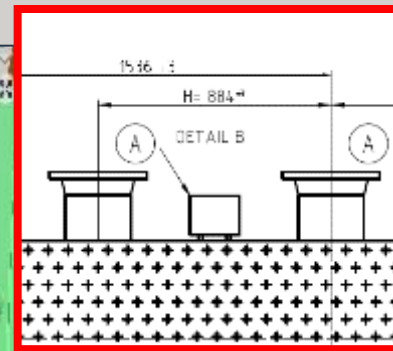
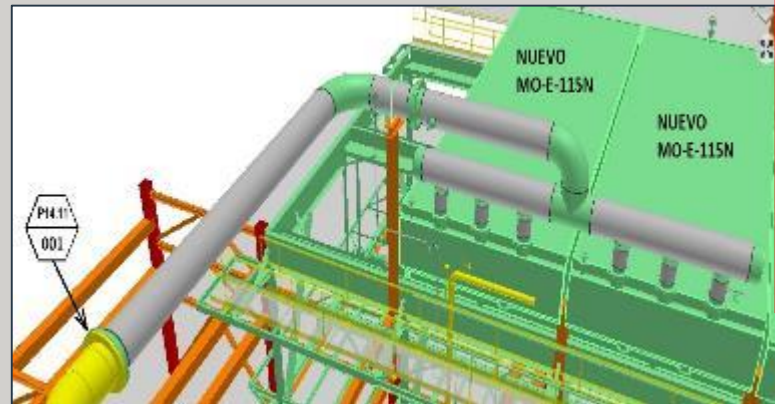
**3 days
72 hours**



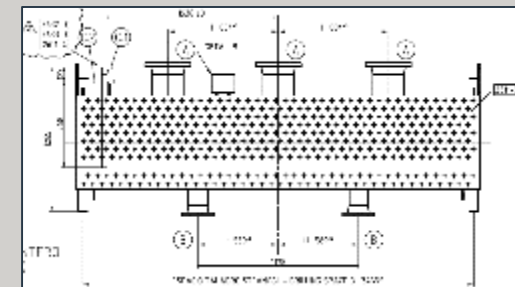
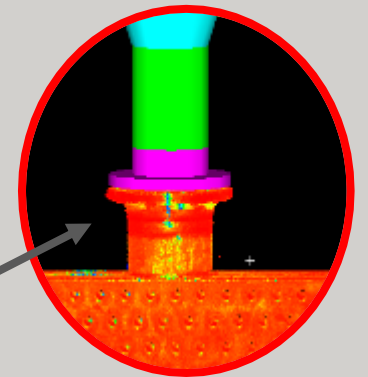
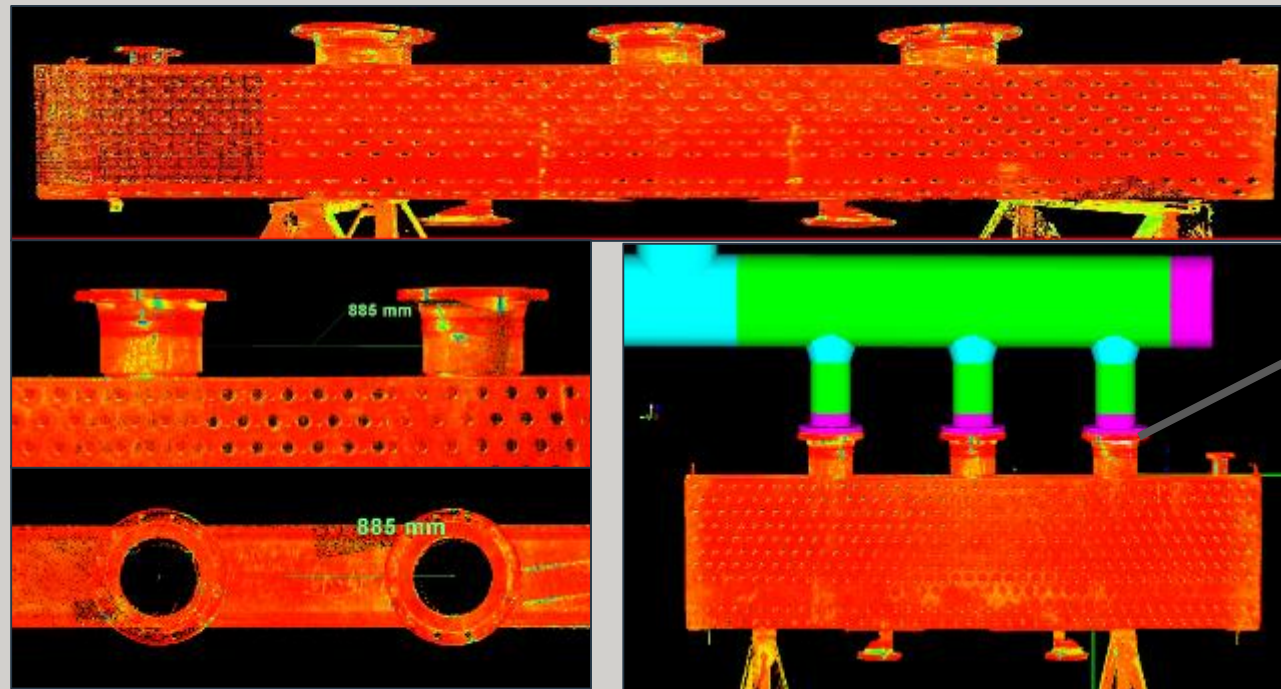


CASES STUDY

P14.11 NEWS BUNDLES MO. REVERSE ENGINEERING.



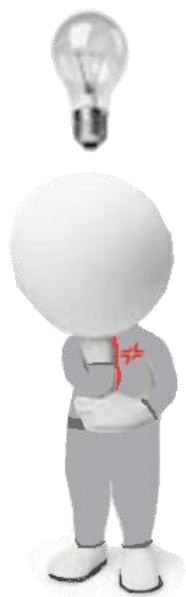
- DIMENSIONAL CONTROL IN MANUFACTURE BUNDLE HOUSE AND IN OPERATOR PIPING MANUFACTURE.
- 3D PREINSTALATION AND CORRECTION OF TOLERANCES.





CASES STUDY

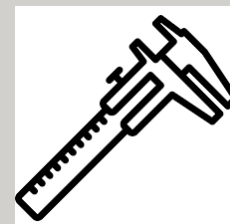
N15.18 COOLER NK-E4 HK.



SCOPE

NEW EXCHANGE COOLER
MATERIAL: F-22 CL3 + WO 347

VILLAINS/ RISKS



STANDART TIME

10 days
240 hours



CASES STUDY

N15.18 COOLER NK-E4 HK.

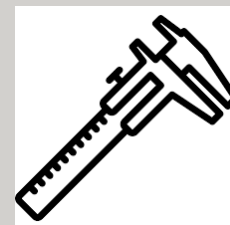


SCOPE

TOLERANCE CONTROL.

NEW EXCHANGE COOLER
MATERIAL: F-22 CL3 + WO 347

VILLAINS/ RISKS



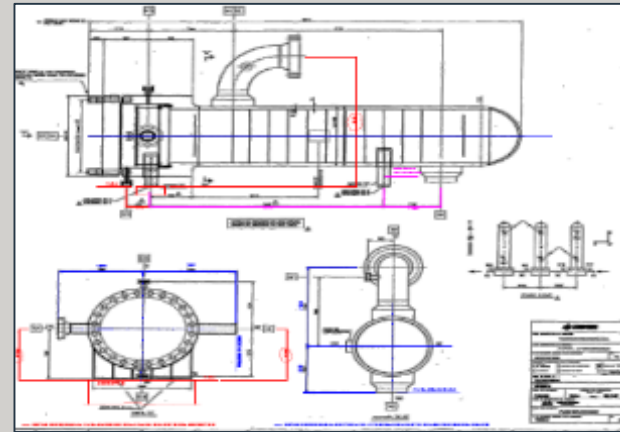
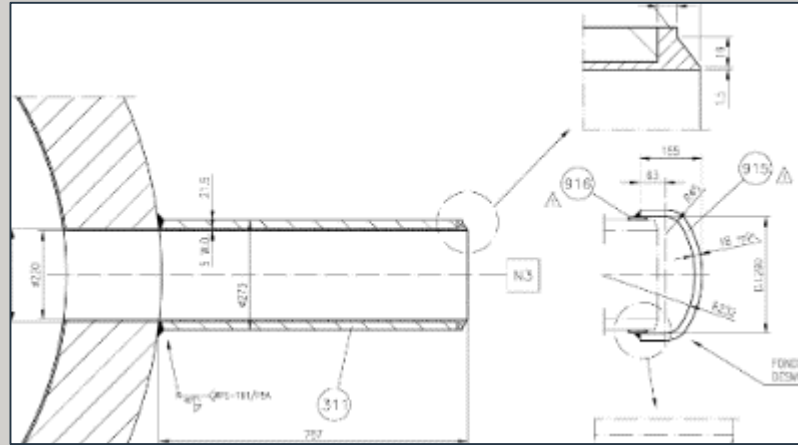
GOAL TIME

**6 days
144 hours**

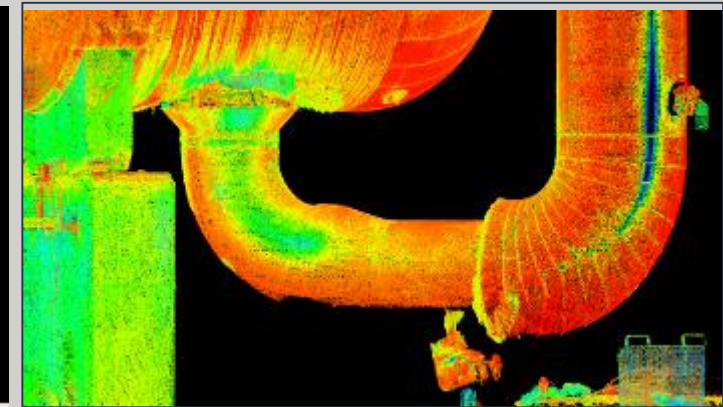
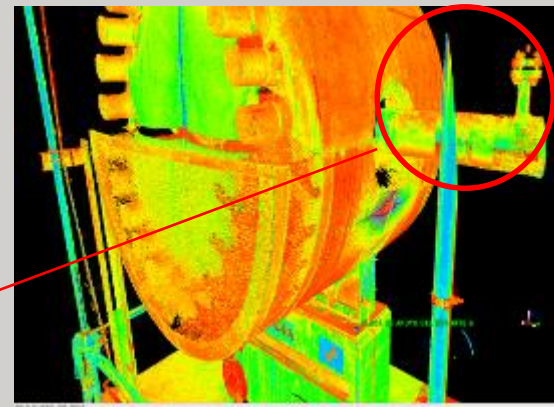


CASES STUDY

N15.18 COOLER NK-E4 HK. TOLERANCE CONTROL.



- DIMENSIONAL CONTROL IN MANUFACTURE BUNDLE HOUSE → CORRECT MEASURE
- 3D PREINSTALLATION AND CORRECTION OF TOLERANCES IN THE CONCRETE FOUNDATION.



- LESSON LEARNED: TOLERANCE OF MANUFACTURE.



CASES STUDY

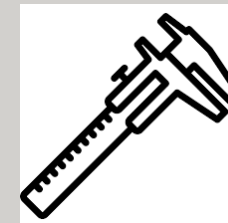
N16.30 NEWS BUNDLES HK.



SCOPE

8 NEW BUNDLES.
4 AIR STRUCTURES
AIR BLOCK COMPLETE CHANGE.
INCOLOY.

VILLAINS/ RISKS



STANDART TIME

22 days
528 hours



CASES STUDY

N16.30 NEWS BUNDLES HK.

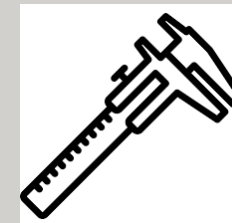


SCOPE

REVERSE ENGINEERING.
+
TOLERANCE CONTROL.

8 NEW BUNDLES.
4 AIR STRUCTURES
AIR BLOCK COMPLETE CHANGE.
INCOLOY.

VILLAINS/ RISKS



GOAL

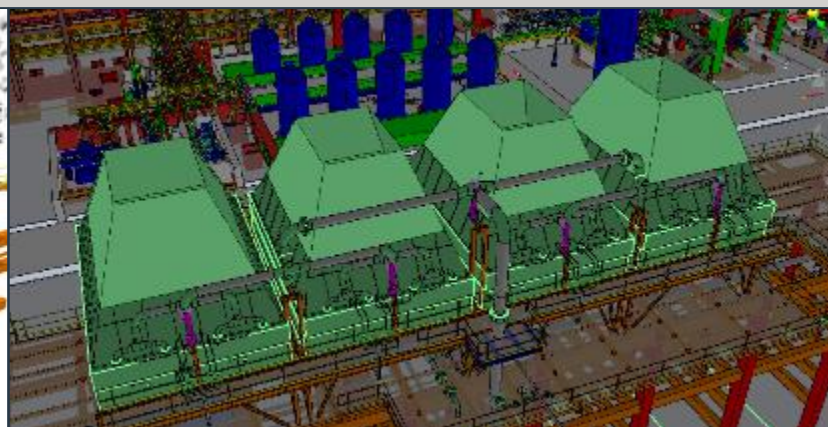
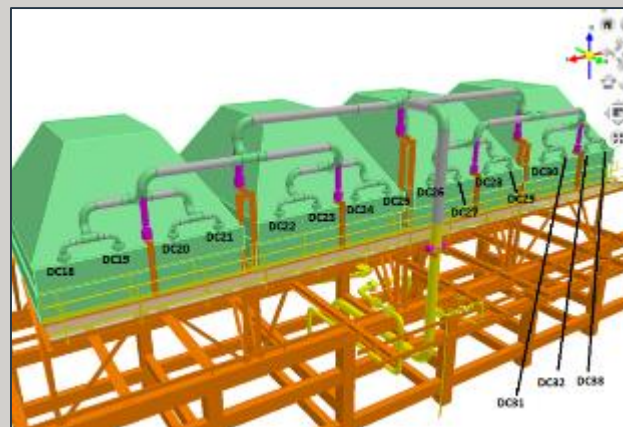
10 days
240 hours



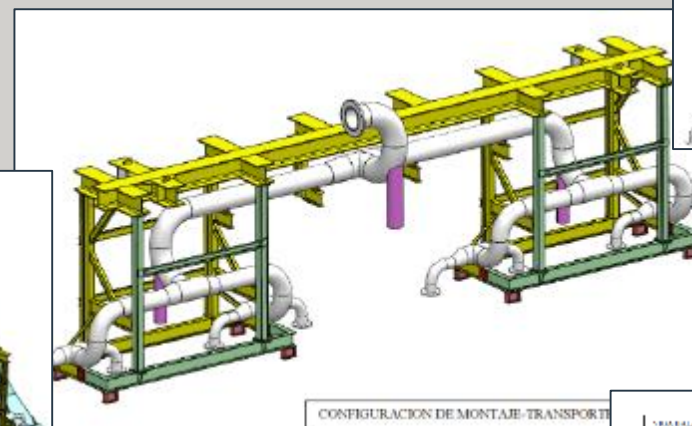
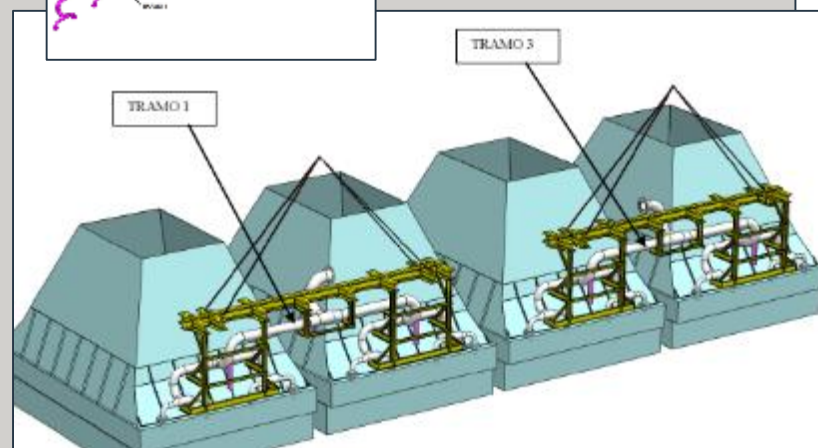
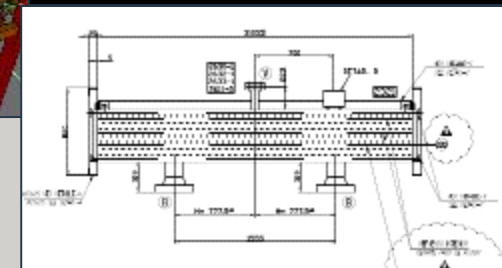
CASES STUDY

N16.30 NEWS BUNDLES HK.

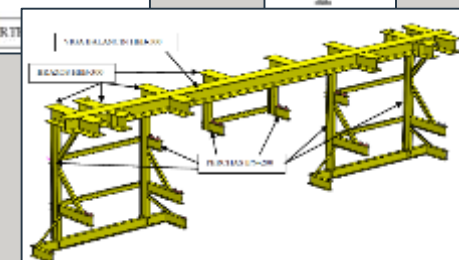
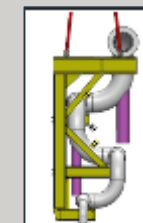
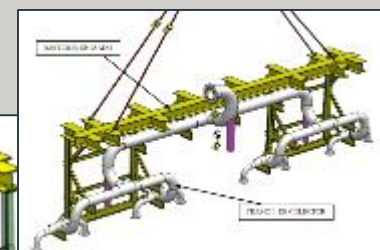
**REVERSE ENGINEERING.
TOLERANCE CONTROL.**



- DIMENSIONAL CONTROL IN MANUFACTURE BUNDLE HOUSE
- 3D PREINSTALLATION AND CORRECTION OF TOLERANCES.
- DECONSTRUCTION IN PART AND STRUCTURE TO LIFTING.



CONFIGURACION DE MONTAJE-TRANSPORTE





CASES STUDY

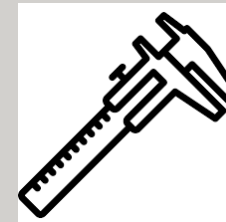
T16.01 WHITE PRODUCTS.



SCOPE

NEW TIE-IN WITH SPOOL TO
TRANSFER WHITE PRODUCT TO
TERMINAL.

VILLAINS/ RISKS



STANDART TIME

**3 days
72 hours**



CASES STUDY

T16.01 WHITE PRODUCTS.

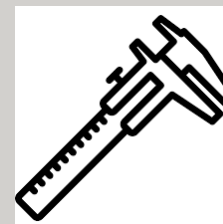


SCOPE

**REVERSE ENGINEERING.
+
TOLERANCE CONTROL.**

NEW TIE-IN WITH SPOOL TO
TRANSFER WHITE PRODUCT TO
TERMINAL.

VILLAINS/ RISKS



GOAL

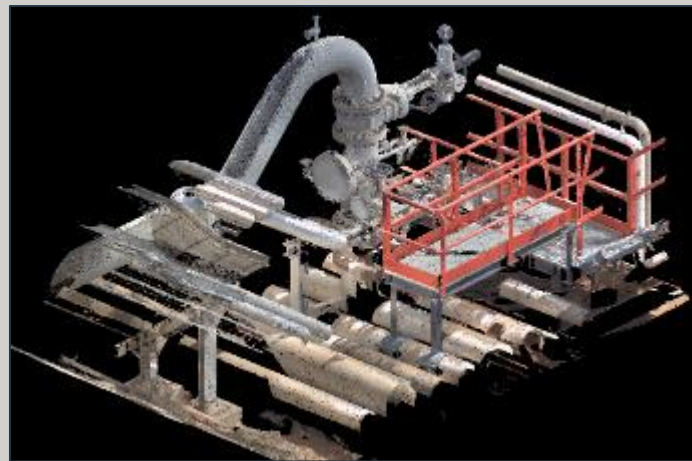
**0,5 days
12 hours**



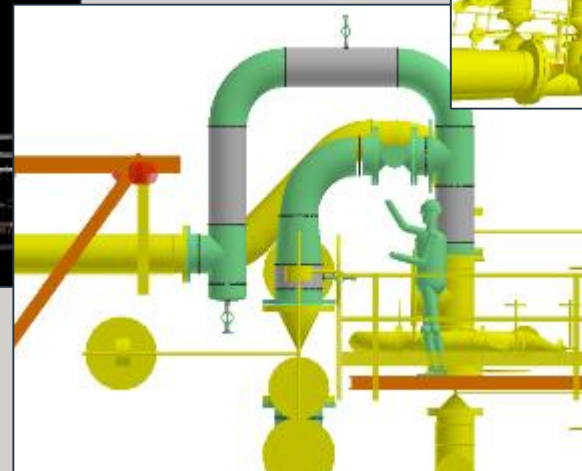
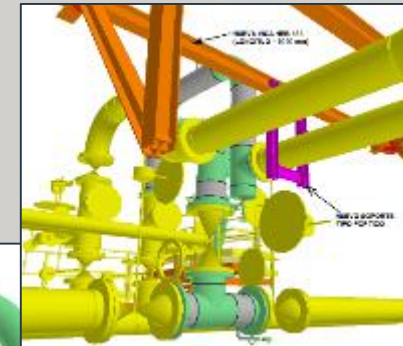
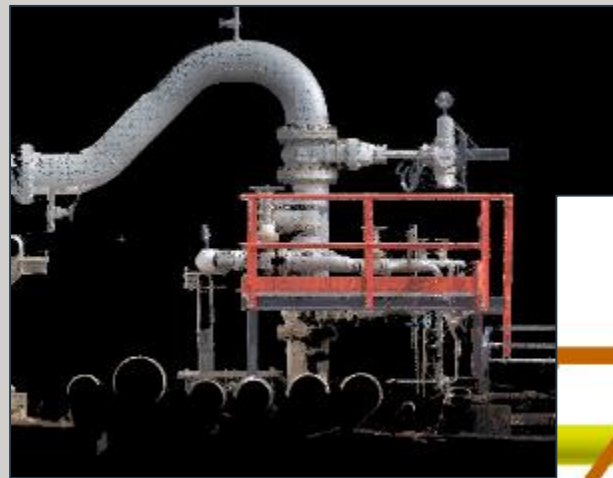
CASES STUDY

T16.01 WHITE PRODUCTS.

**REVERSE ENGINEERING.
TOLERANCE CONTROL.**



- DIMENSIONAL CONTROL IN PIPING MANUFACTURE.
- 3D PREINSTALLATION AND CORRECTION OF TOLERANCES.
- CONTROL OF DISPLACEMENT IN PIPING.





**CEPSA TURNAROUND
METHODOLOGY 4.0**

TURNAROUNDS





**CEPSA TURNAROUND
METHODOLOGY 4.0**

TURNAROUND METHODOLOGY 4.0

PILLARS



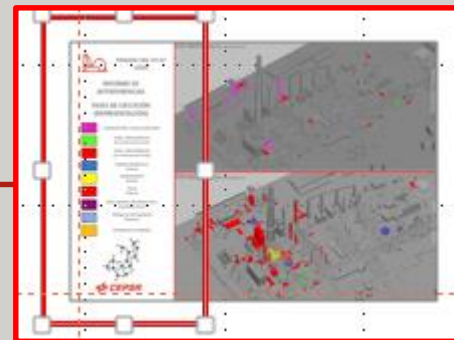


**CEPSA TURNAROUND
METHODOLOGY 4.0**

TURNAROUND METHODOLOGY 4.0

PILLARS

Methodology



**Interference
management**

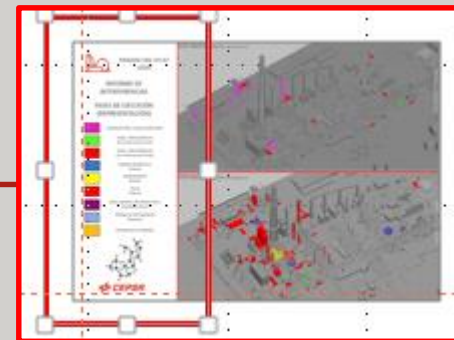


**CEPSA TURNAROUND
METHODOLOGY 4.0**

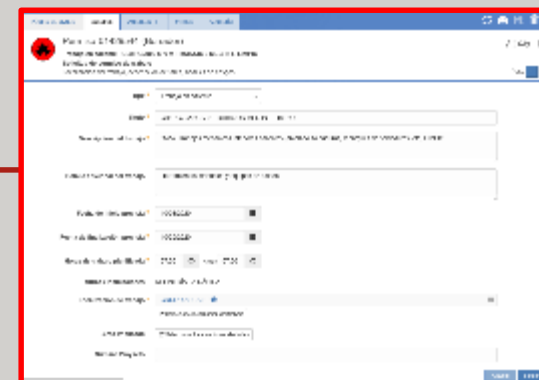
TURNAROUND METHODOLOGY 4.0

PILLARS

Methodology



**Interference
management**



Permit to Work

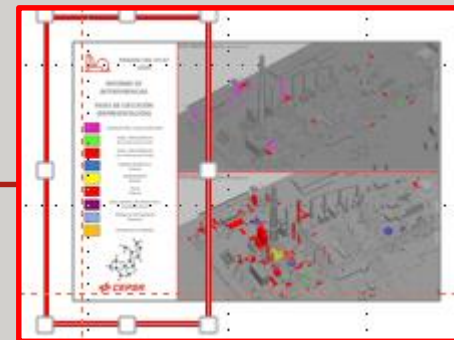


**CEPSA TURNAROUND
METHODOLOGY 4.0**

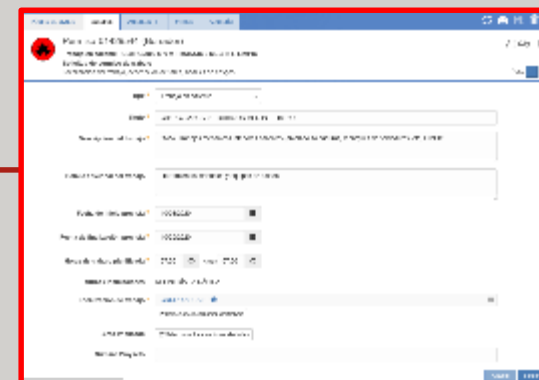
TURNAROUND METHODOLOGY 4.0

PILLARS

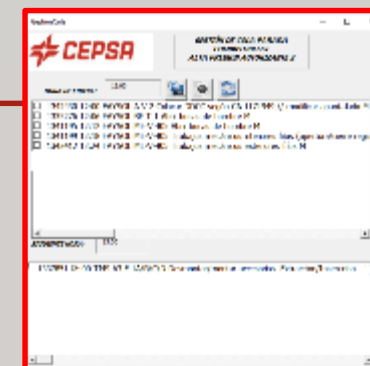
Methodology



**Interference
management**



Permit to Work



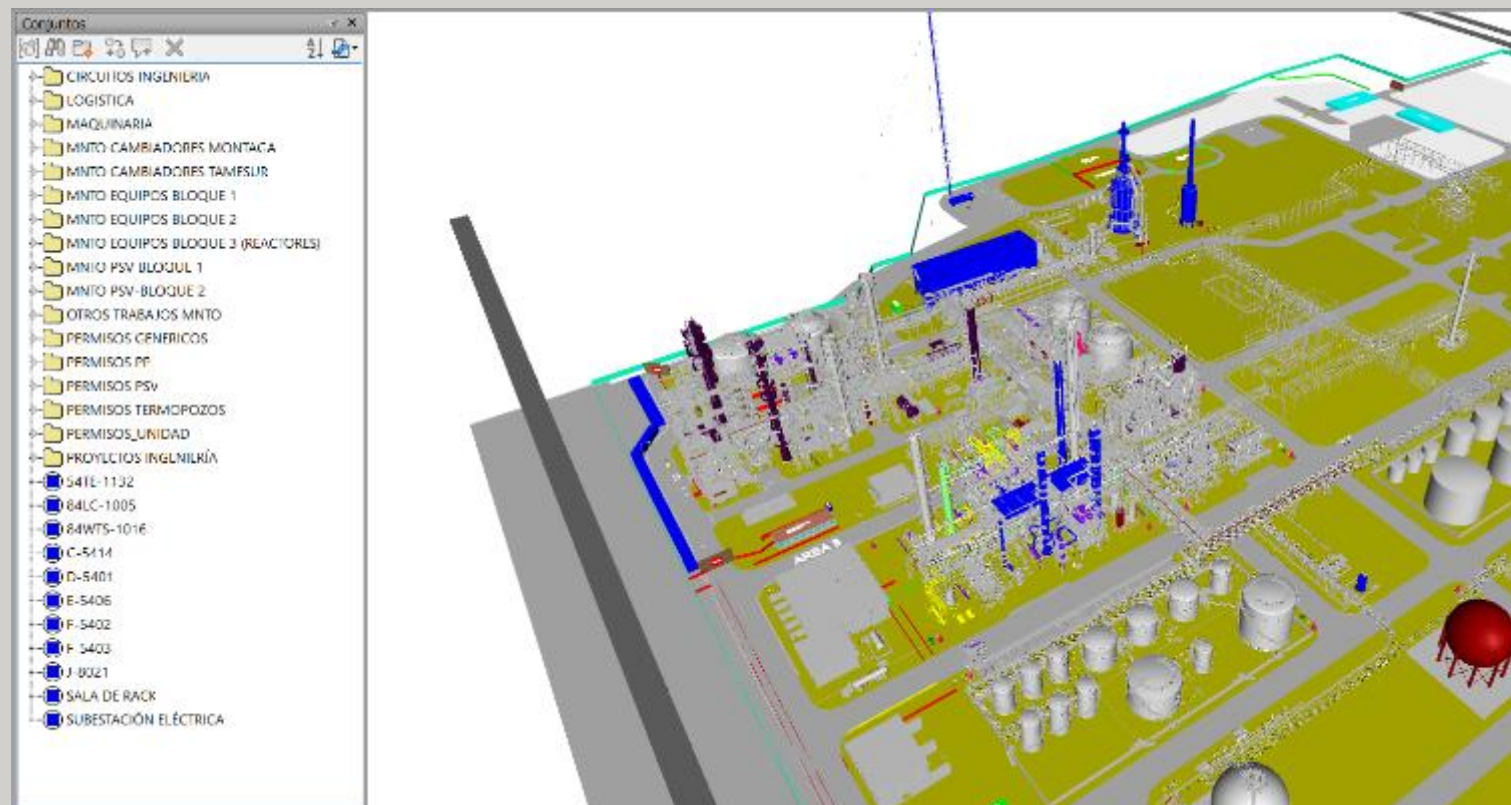
**Queue
monitoring
control of
permits
to work**



**CEPSA TURNAROUND
METHODOLOGY 4.0**

MODEL GROUPS, BLOCKS, PSVs, PROCUREMENT and WORKLOAD MANAGEMENT

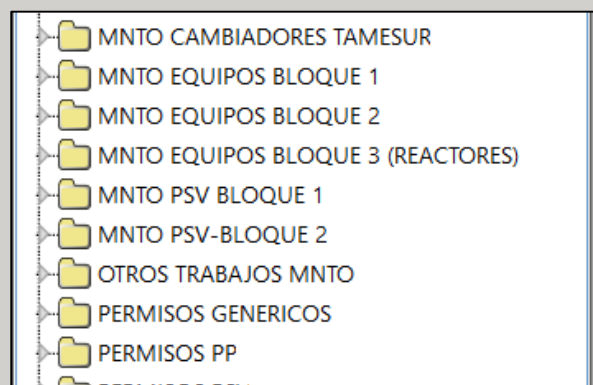
**3D MODELS
PREVIOUS WORKS**





MODEL GROUPS, BLOCKS, PSVs, PROCUREMENT and WORKLOAD MANAGEMENT

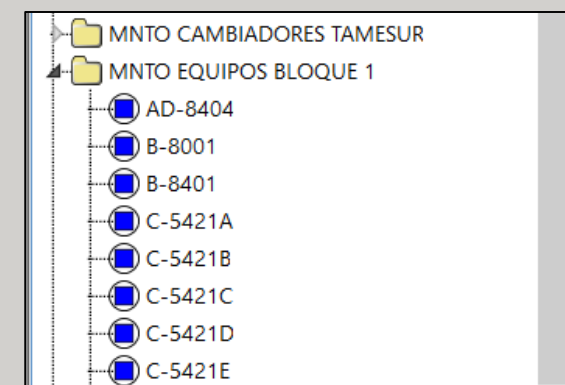
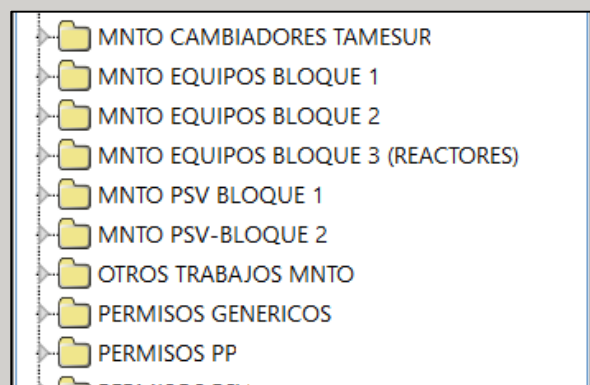
3D MODELS
PREVIOUS WORKS





MODEL GROUPS, BLOCKS, PSVs, PROCUREMENT and WORKLOAD MANAGEMENT

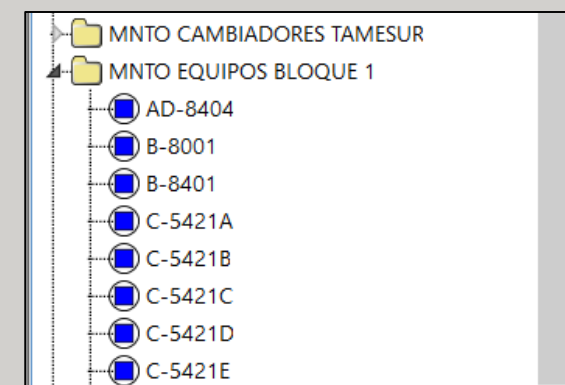
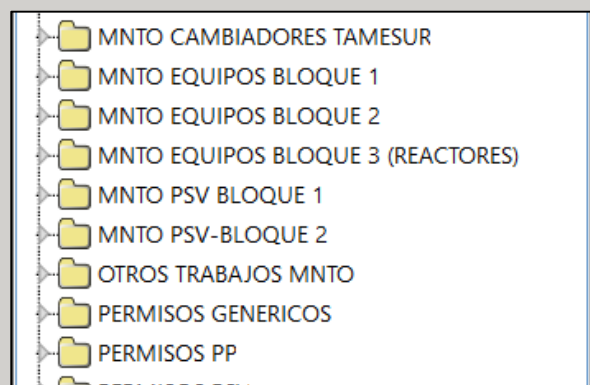
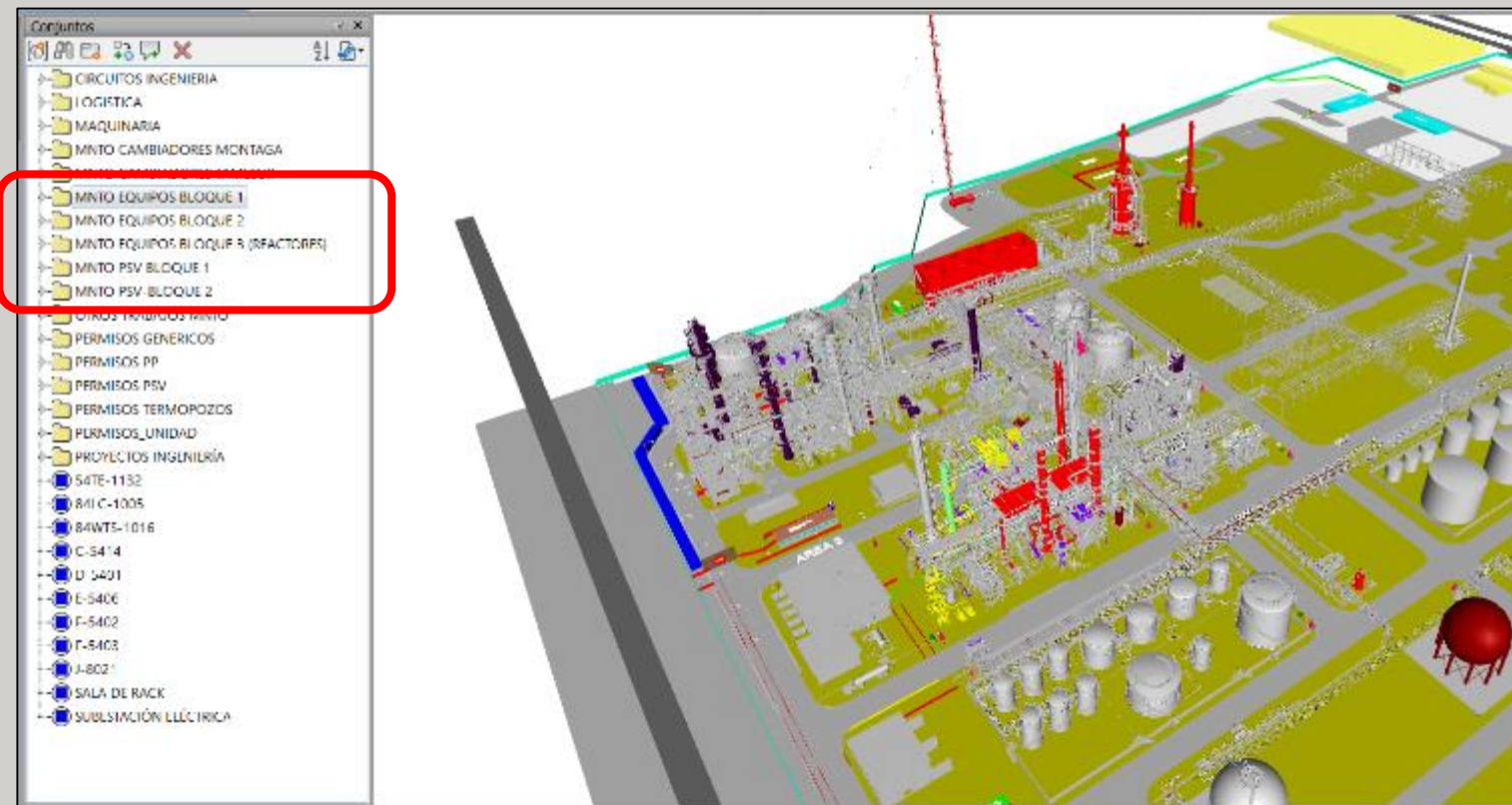
3D MODELS
PREVIOUS WORKS





MODEL GROUPS, BLOCKS, PSVs, PROCUREMENT and WORKLOAD MANAGEMENT

3D MODELS
PREVIOUS WORKS



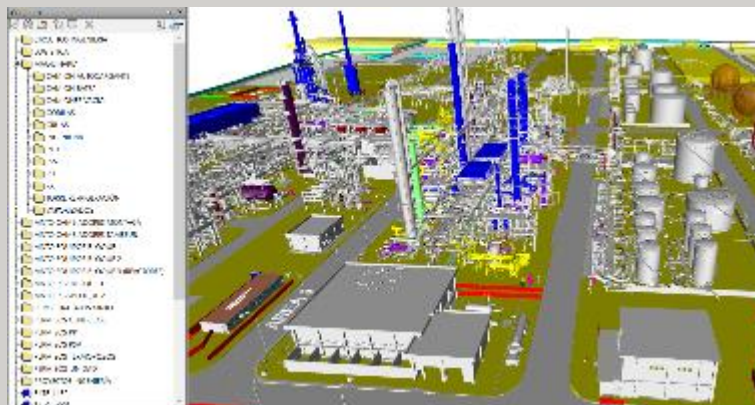


CEPSA TURNAROUND METHODOLOGY 4.0

STUDY OF INTERFERENCES

EQUIPMENT IMPLEMENTATION

3D MODELS PREVIOUS WORKS



3D MODEL BASE

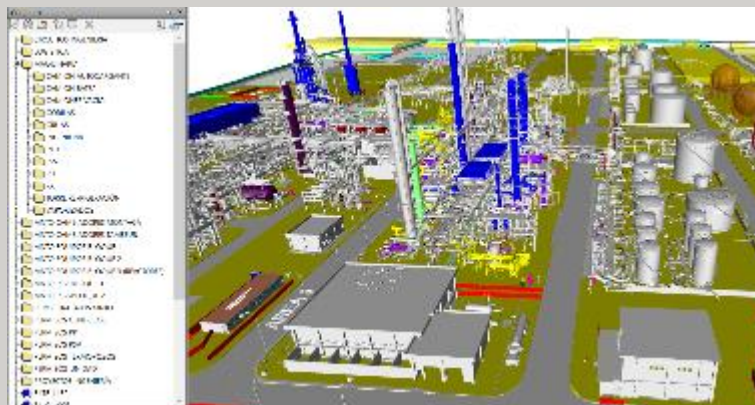


CEPSA TURNAROUND METHODOLOGY 4.0

STUDY OF INTERFERENCES

EQUIPMENT IMPLEMENTATION

3D MODELS PREVIOUS WORKS



3D MODEL BASE



EQUIPMENT IMPLEMENTATION
(CRANES, TRUCKS, CLEANING EQUIPMENT,...)

ACCORDING TO THE NEEDS OF THE MANEUVERS

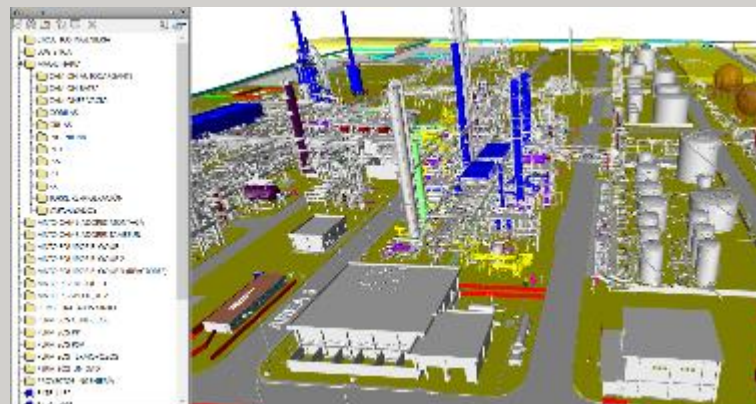


CEPSA TURNAROUND METHODOLOGY 4.0

STUDY OF INTERFERENCES

EQUIPMENT IMPLEMENTATION

3D MODELS PREVIOUS WORKS



3D MODEL BASE



EQUIPMENT IMPLEMENTATION
(CRANES, TRUCKS, CLEANING EQUIPMENT,...)

ACCORDING TO THE NEEDS OF THE MANEUVERS



GENERAL VIEW MODEL WITH
IMPLEMENTATION

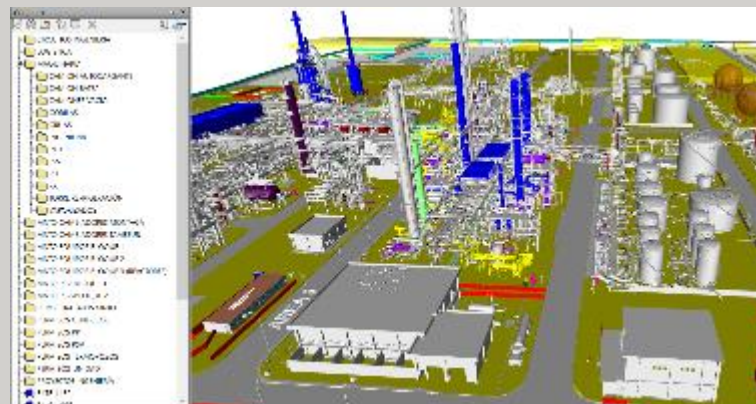


CEPSA TURNAROUND METHODOLOGY 4.0

STUDY OF INTERFERENCES

EQUIPMENT IMPLEMENTATION

3D MODELS PREVIOUS WORKS

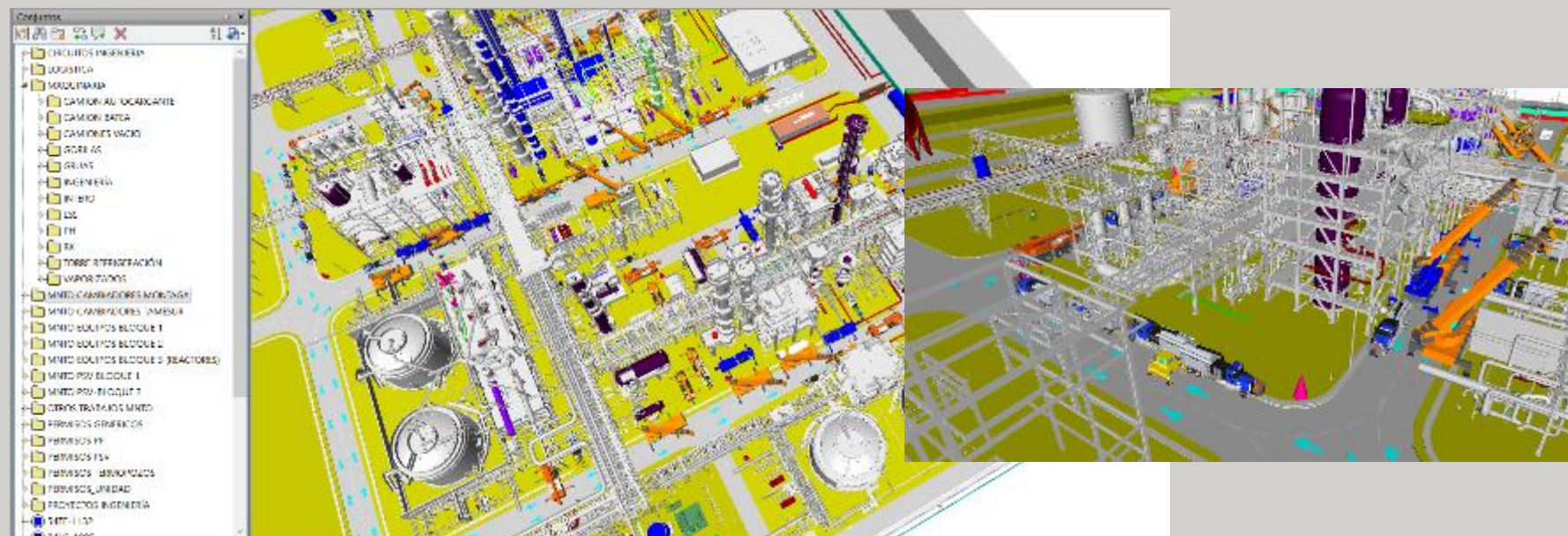


3D MODEL BASE



EQUIPMENT IMPLEMENTATION
(CRANES, TRUCKS, CLEANING EQUIPMENT,...)

ACCORDING TO THE NEEDS OF THE MANEUVERS



GENERAL VIEW MODEL WITH
IMPLEMENTATION

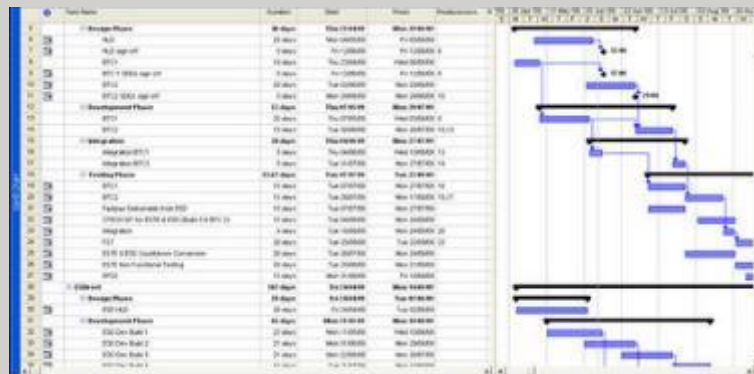


CEPSA TURNAROUND METHODOLOGY 4.0

STUDY OF INTERFERENCES

PLANNING INTEGRATION

3D MODELS PREVIOUS WORKS



PROJECT PLANNING





3D MODELS

PREVIOUS WORKS

AUTOMATIC LINKING IN THE 3D MODEL



PROJECT PLANNING

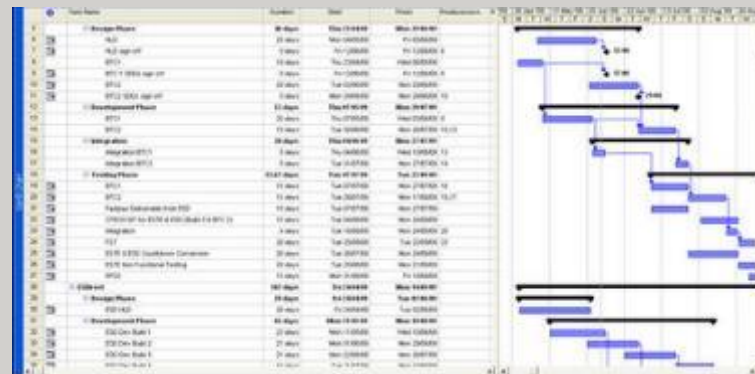


CEPSA TURNAROUND METHODOLOGY 4.0

STUDY OF INTERFERENCES

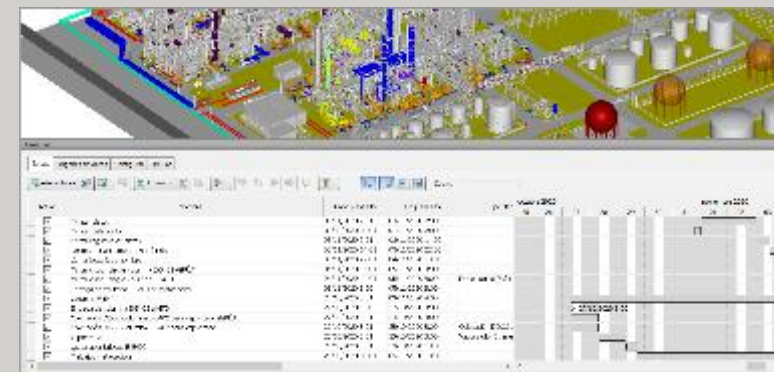
PLANNING INTEGRATION

3D MODELS PREVIOUS WORKS

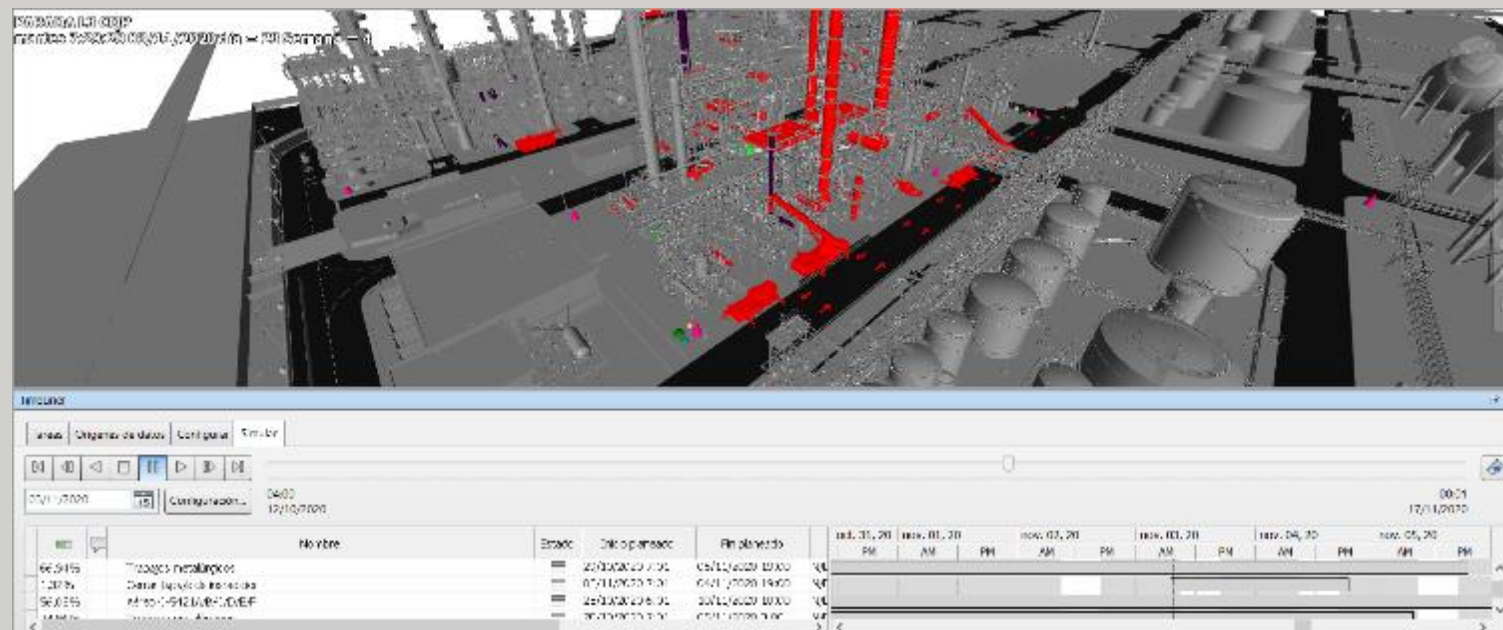


PROJECT PLANNING

AUTOMATIC LINKING IN THE 3D MODEL



3D MODEL



SIMULATION

SIMULATION OF THE PLANNING FOR THE STUDY OF INTERFERENCES IN THE PROJECT

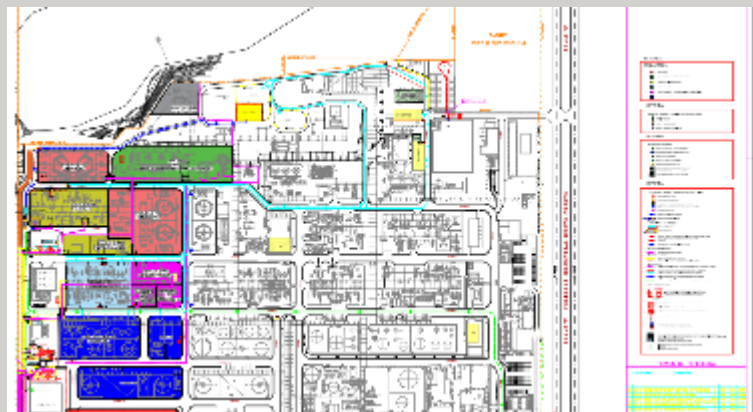


**CEPSA TURNAROUND
METHODOLOGY 4.0**

LOGISTICS

INFORMATION

**3D MODELS
PREVIOUS WORKS**



PRELIMINARY STUDY



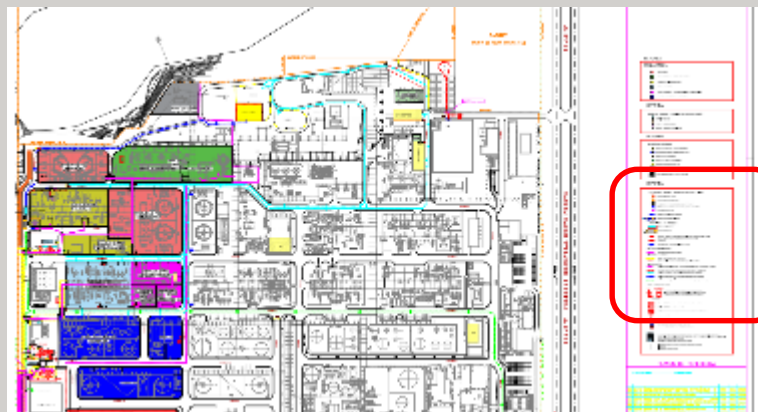


CEPSA TURNAROUND METHODOLOGY 4.0

LOGISTICS

INFORMATION

3D MODELS PREVIOUS WORKS



PRELIMINARY STUDY



Delimitación de zona de parada L3

TIPOS DE VALLADO

- Vallado mod. Ayuntamiento. Altura 1,00 m.
- Vallado metálico de obra con pie de hormigón. Altura 1,90 m.

CIRCULACIÓN

- Circulación peatonal por zonas marcadas respetando pasos de peatones y accesos.
- Circulación con vehículos autorizados contreras (coches y furgonetas)
- Circulación GORILAS CON CAMBIADORES SUCIOS Y LIMPIOS
- Circulación restringida a vehículos autorizados descarga catalizador
- Circulación restringida sólo a vehículos autorizados (grúas y camiones)

ZONAS DE DESCANSO

Módulos de descanso formados por material de andamios, con bandejas para asiento en el perímetro con anchura de 700 mm. Dispondrán de lona en techo y laterales para proteger de la lluvia, con iluminación en interior, máquinas de café, neveras, vestida de agua y básculas de recogida de residuos urbanos.

Mód. andamios

Mód. A1 Módulo asco 6.00x2.44 m, Femenino-Masculino, 3-3 us (asoc mujeres-asoc hombres)

Mód. A2 Módulo asco 6.00x2.44 m, 6 us (asoc hombres)



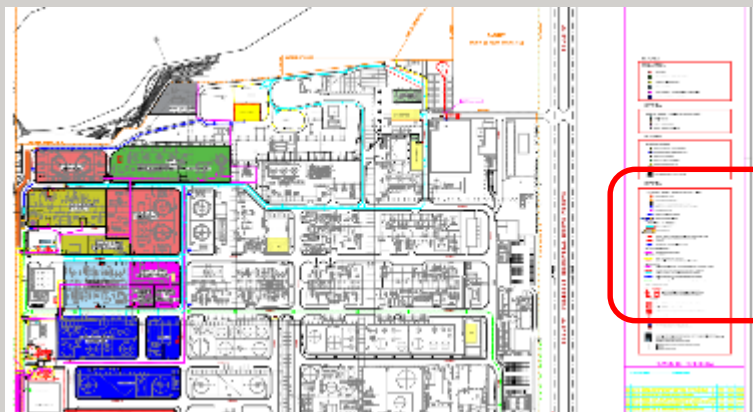


CEPSA TURNAROUND METHODOLOGY 4.0

LOGISTICS

INFORMATION

3D MODELS PREVIOUS WORKS



PRELIMINARY STUDY



LOGISTICS 3D MODEL

Delimitación de zona de parada L3

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Mód. A2 Módulo asco 6.00x2.44 m, 6 us (asoc hombres)

MAIN INFORMATION IN THE 3D MODEL:

- **ACCESS.**
- **CIRCULATION FLOWS.**
- **RESTRICTED CIRCULATION.**
- **REST AREAS.**
- **EQUIPMENT CLEANING AREAS.**
- **PARKING AREAS.**
- ...

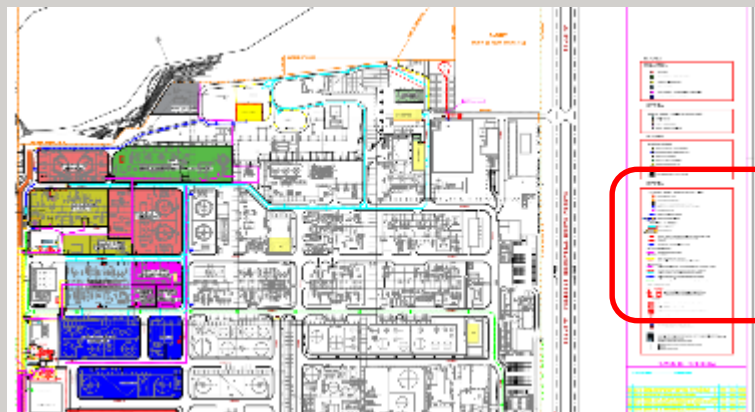


CEPSA TURNAROUND METHODOLOGY 4.0

LOGISTICS

INFORMATION

3D MODELS PREVIOUS WORKS



PRELIMINARY STUDY



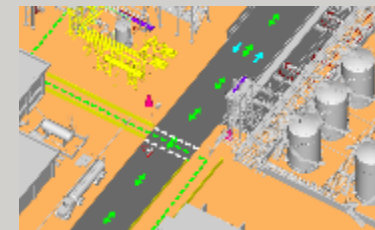
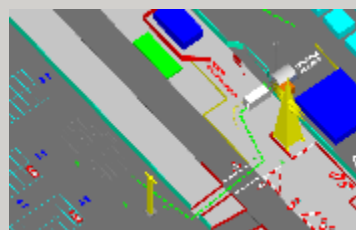
Delimitación de zona de parada L3
TIPOS DE VALLADO
 Valla de mod. Ayuntamiento. Altura 1,00 m.
 Valla metálica de obra con pie de hormigón. Altura 1,90 m.
CIRCULACIÓN
 Circulación peatonal por zonas marcadas respetando pasos de peatones y accesos.
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- **PARKING AREAS.**
- ...



LOGISTICS 3D MODEL



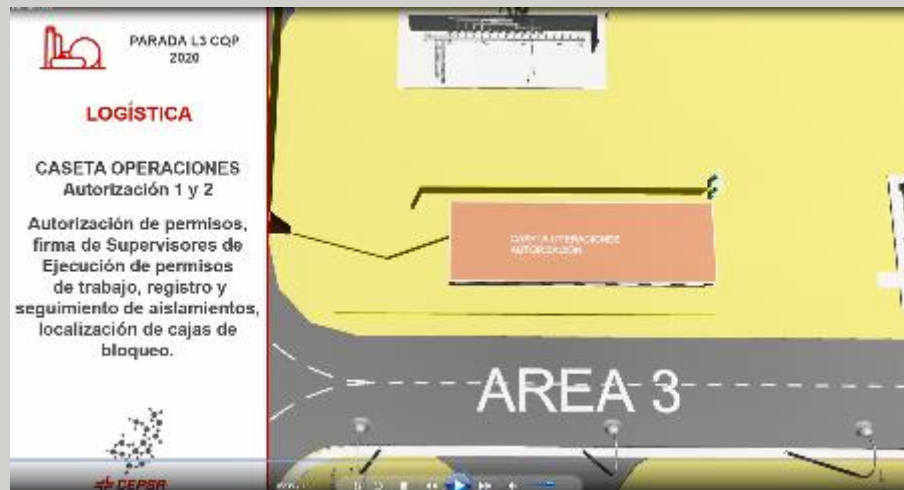


CEPSA TURNAROUND METHODOLOGY 4.0

LOGISTICS

FORMATIVE VIDEO FOR
CONTRACTORS

3D MODELS
PREVIOUS WORKS





LOGISTICS

FORMATIVE VIDEO FOR
CONTRACTORS

3D MODELS
PREVIOUS WORKS



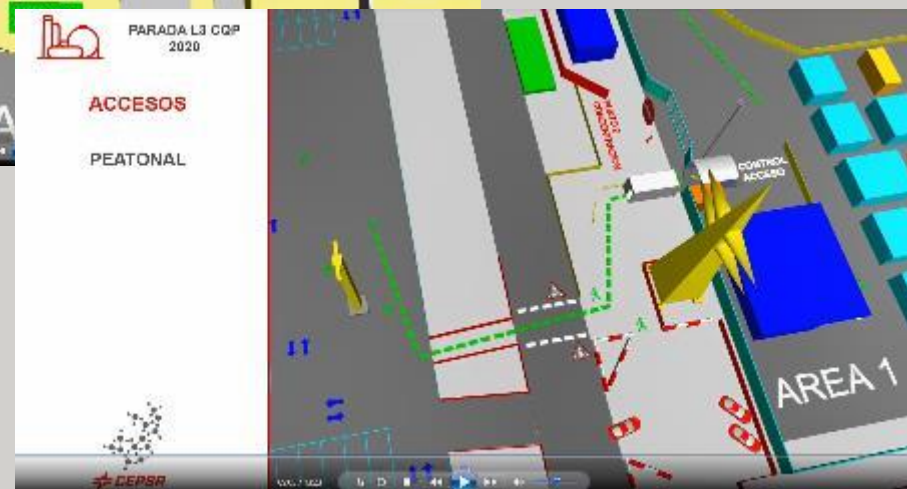


CEPSA TURNAROUND METHODOLOGY 4.0

LOGISTICS

FORMATIVE VIDEO FOR
CONTRACTORS

3D MODELS
PREVIOUS WORKS





**CEPSA TURNAROUND
METHODOLOGY 4.0**

3D MODELS INDUSTRIAL PLANTS

OLD INDUSTRIAL PLANTS

**3D MODELS
PREVIOUS WORKS**



OLD INDUSTRIAL PLANTS

**3D MODELS WITH POOR DEFINITION
WITH A LESS LEVEL OF DETAIL IN: :**

- **STRUCTURES AND PLATFORMS.**
- **EQUIPMENT DETAILS.**
- **PIPING LINES.**
- **VALVES MODELS**
- **...**



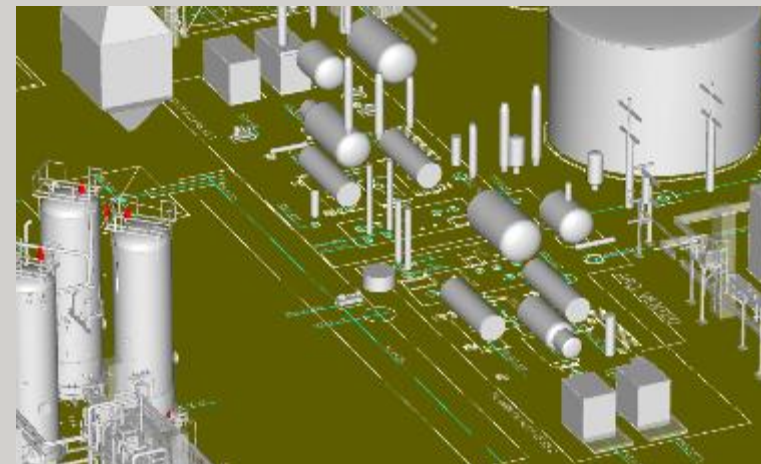
3D MODELS INDUSTRIAL PLANTS

OLD INDUSTRIAL PLANTS

**3D MODELS
PREVIOUS WORKS**



OLD INDUSTRIAL PLANTS



**3D MODELS WITH POOR DEFINITION
WITH A LESS LEVEL OF DETAIL IN: :**

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- **VALVES MODELS**
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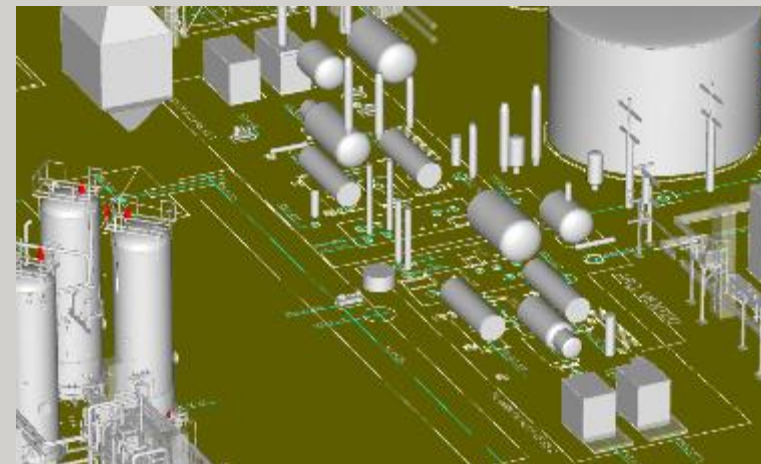
3D MODELS INDUSTRIAL PLANTS

OLD INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS

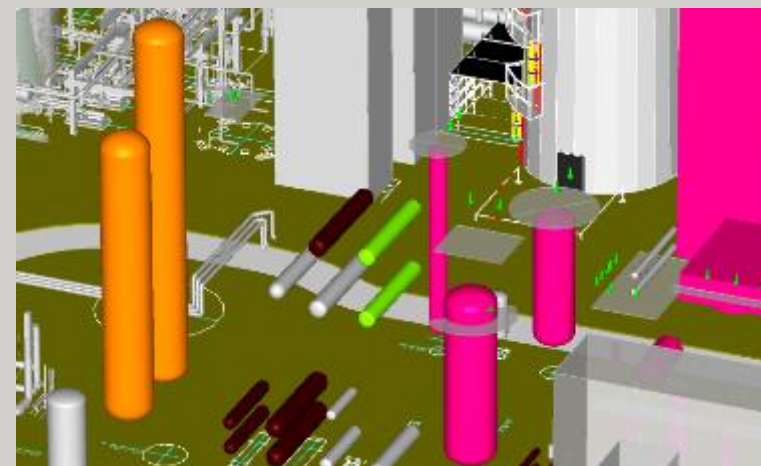


OLD INDUSTRIAL PLANTS



3D MODELS WITH POOR DEFINITION
WITH A LESS LEVEL OF DETAIL IN: :

- STRUCTURES AND PLATFORMS.
- EQUIPMENT DETAILS.
- PIPING LINES.
- VALVES MODELS
- ...





**CEPSA TURNAROUND
METHODOLOGY 4.0**

3D MODELS INDUSTRIAL PLANTS

OLD INDUSTRIAL PLANTS

**3D MODELS
PREVIOUS WORKS**



OLD INDUSTRIAL PLANTS

**THESE MODELS NEED A LONGER TIME
PREPARATION FOR THE REPRESENTATION
OF THE INTERFERENCE STUDY.**



3D MODELS INDUSTRIAL PLANTS

OLD INDUSTRIAL PLANTS

**3D MODELS
PREVIOUS WORKS**



OLD INDUSTRIAL PLANTS

**THESE MODELS NEED A LONGER TIME
PREPARATION FOR THE REPRESENTATION
OF THE INTERFERENCE STUDY.**

**REPRESENTATION CRITERIA HAVE BEEN
DEFINED**



IMPLEMENTATION STAGES (GRAPHIC REPRESENTATION)	
	VAPORIZATION / PLACEMENT DCCC
	METALLURGICAL WORKS (Without Crane Intervention)
	METALLURGICAL WORKS (With Crane Intervention)
	HYDRAULIC TESTS (Sphere)
	X-RAYS (Sphere)
	TIE-IN (Sphere)
	UNIT DCCC / REMOVAL DCCC (Equipment - Sphere)
	WORKS WITH ASBESTOS (Equipment)
	AUXILIARY WORK (Sphere)
	THERMOWELL (Sphere)



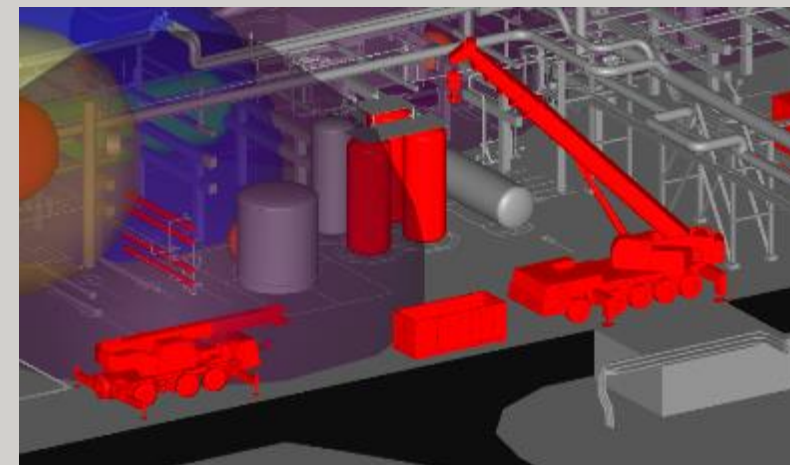
3D MODELS INDUSTRIAL PLANTS

OLD INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



OLD INDUSTRIAL PLANTS



METALLURGICAL WORKS
(WITH CRANE INTERVENTION)

THESE MODELS NEED A LONGER TIME
PREPARATION FOR THE REPRESENTATION
OF THE INTERFERENCE STUDY.

REPRESENTATION CRITERIA HAVE BEEN
DEFINED

THAT HELP US COMPRESSION OF THE STATE
OF EXECUTION (EXAMPLES)

- **METALLURGICAL WORKS
(WITH CRANE INTERVENTION)**



IMPLEMENTATION STAGES (GRAPHIC REPRESENTATION)	
	VAPORIZATION / PLACEMENT DCCC
	METALLURGICAL WORKS (Without Crane Intervention)
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	WORKS WITH ASBESTOS (Equipment)
	AUXILIARY WORK (Sphere)
	THERMOWELL (Sphere)



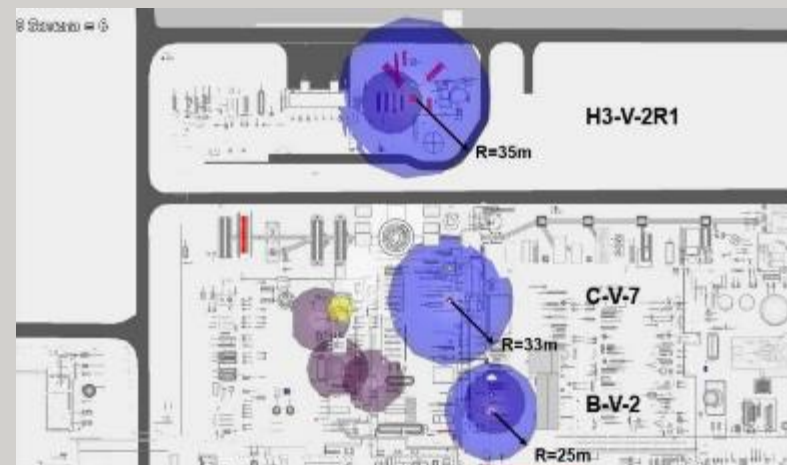
3D MODELS INDUSTRIAL PLANTS

OLD INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



OLD INDUSTRIAL PLANTS



HYDRAULIC TESTS (SPHERE)

REPRESENTATION OF SPHERES THAT INDICATE THE
SAFETY AREAS BEACONS DURING THE TEST

THESE MODELS NEED A LONGER TIME
PREPARATION FOR THE REPRESENTATION
OF THE INTERFERENCE STUDY.

REPRESENTATION CRITERIA HAVE BEEN
DEFINED

THAT HELP US COMPRESSION OF THE STATE
OF EXECUTION (EXAMPLES)

- **HYDRAULIC TESTS
(SPHERE)**



IMPLEMENTATION STAGES (GRAPHIC REPRESENTATION)	
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	METALLURGICAL WORKS (Without Crane Intervention)
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	WORKS WITH ASBESTOS (Equipment)
	AUXILIARY WORK (Sphere)
	THERMOWELL (Sphere)



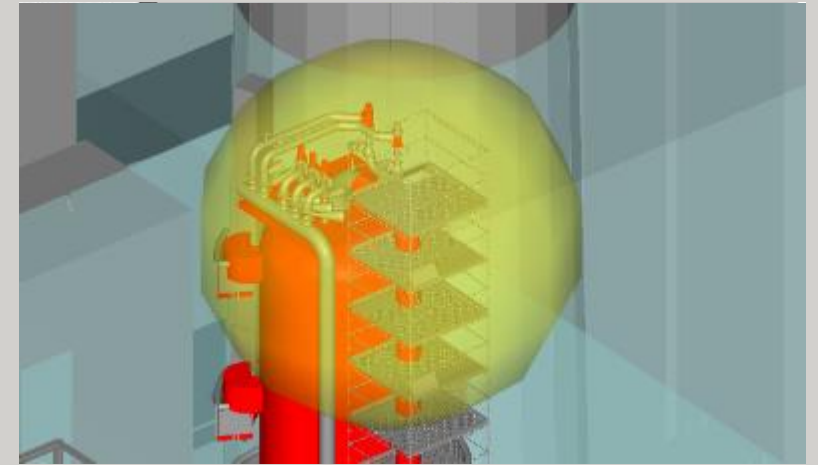
3D MODELS INDUSTRIAL PLANTS

OLD INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



OLD INDUSTRIAL PLANTS



X-RAYS (SPHERE)

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DEFINED

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OF EXECUTION (EXAMPLES)

- **X-RAYS
(SPHERE)**



IMPLEMENTATION STAGES (GRAPHIC REPRESENTATION)	
	VAPORIZATION / PLACEMENT DCCC
	METALLURGICAL WORKS (Without Crane Intervention)
	METALLURGICAL WORKS (With Crane Intervention)
	HYDRAULIC TESTS (Sphere)
	X-RAYS (Sphere)
	TIE-IN (Sphere)
	UNIT DCCC / REMOVAL DCCC (Equipment - Sphere)
	WORKS WITH ASBESTOS (Equipment)
	AUXILIARY WORK (Sphere)
	THERMOWELL (Sphere)



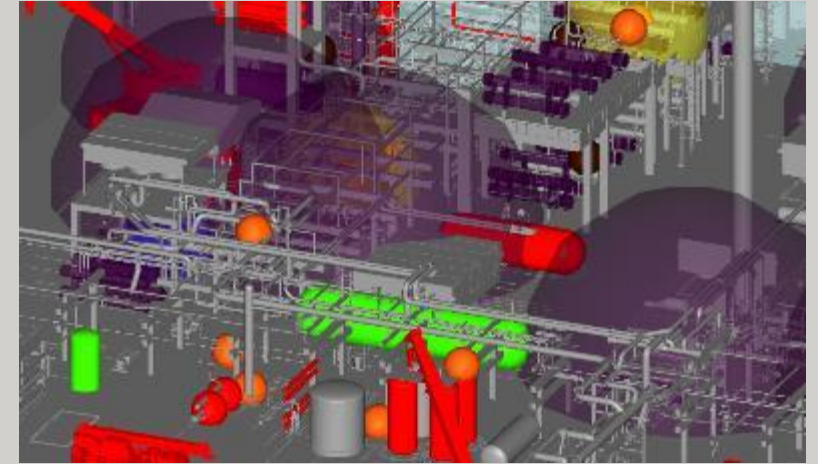
3D MODELS INDUSTRIAL PLANTS

OLD INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



OLD INDUSTRIAL PLANTS



THERMOWELL, TIE-IN, AUX. WORKS
(SPHERE)

LOCATION OF ELEMENTS FOR THE CONTROL OF THE
DAILY EXECUTION

THESE MODELS NEED A LONGER TIME
PREPARATION FOR THE REPRESENTATION
OF THE INTERFERENCE STUDY.

REPRESENTATION CRITERIA HAVE BEEN
DEFINED

THAT HELP US COMPRESSION OF THE STATE
OF EXECUTION (EXAMPLES)

- THERMOWELL, TIE-IN, AUX. WORKS
(SPHERE)



IMPLEMENTATION STAGES (GRAPHIC REPRESENTATION)	
	VAPORIZATION / PLACEMENT DCCC
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	METALLURGICAL WORKS (With Crane Intervention)
	HYDRAULIC TESTS (Sphere)
	X-RAYS (Sphere)
	TIE-IN (Sphere)
	UNIT DCCC / REMOVAL DCCC (Equipment - Sphere)
	WORKS WITH ASBESTOS (Equipment)
	AUXILIARY WORK (Sphere)
	THERMOWELL (Sphere)

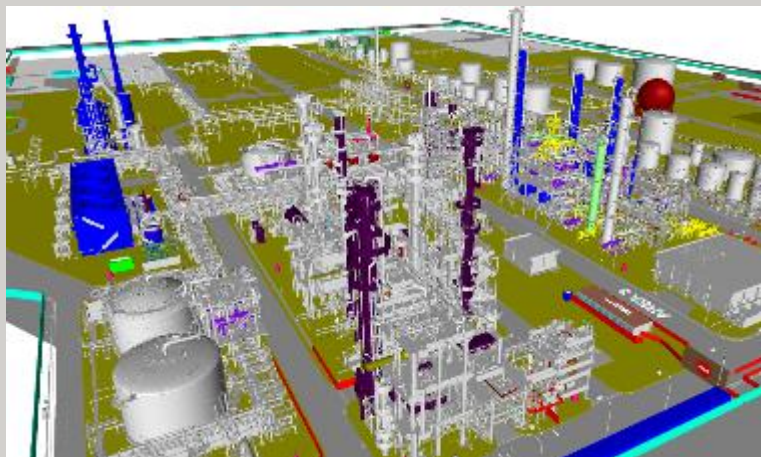


**CEPSA TURNAROUND
METHODOLOGY 4.0**

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

**3D MODELS
PREVIOUS WORKS**



NEW INDUSTRIAL PLANTS

3D MODEL WITH HIGH DEFINITION OF DETAILS.

**REDUCTION OF TIME NEEDED FOR PREPARATION
REPRESENTATION OF THE INTERFERENCE STUDY.**





**CEPSA TURNAROUND
METHODOLOGY 4.0**

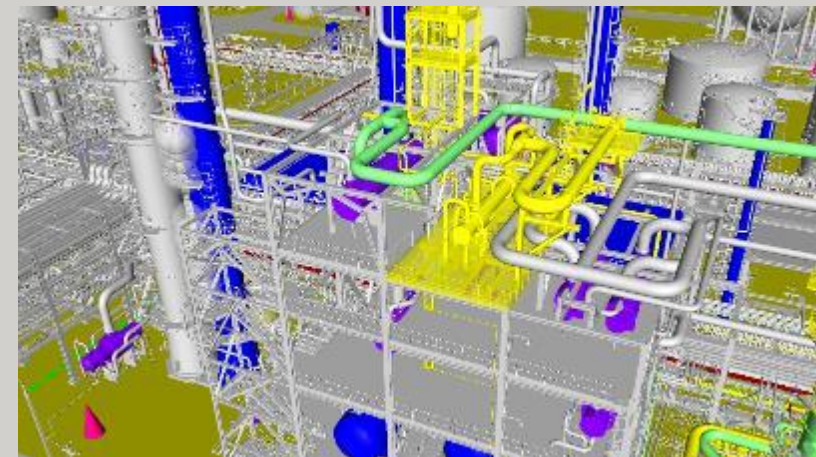
3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

**3D MODELS
PREVIOUS WORKS**



NEW INDUSTRIAL PLANTS



3D MODEL WITH HIGH DEFINITION OF DETAILS.

**REDUCTION OF TIME NEEDED FOR PREPARATION
REPRESENTATION OF THE INTERFERENCE STUDY.**

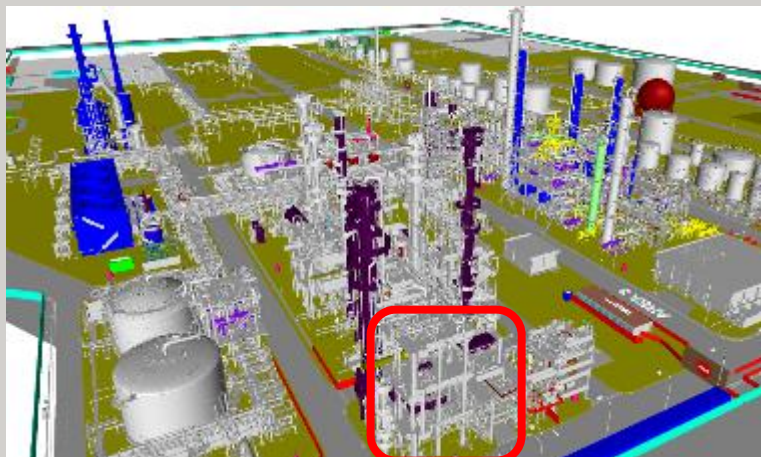


**CEPSA TURNAROUND
METHODOLOGY 4.0**

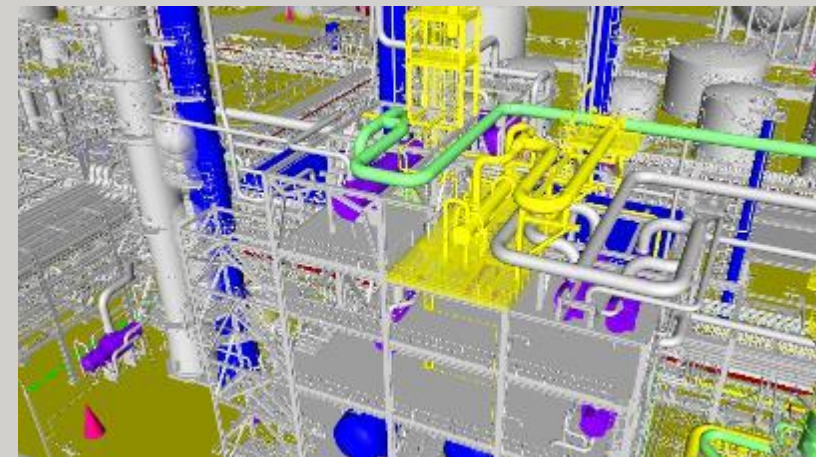
3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

**3D MODELS
PREVIOUS WORKS**

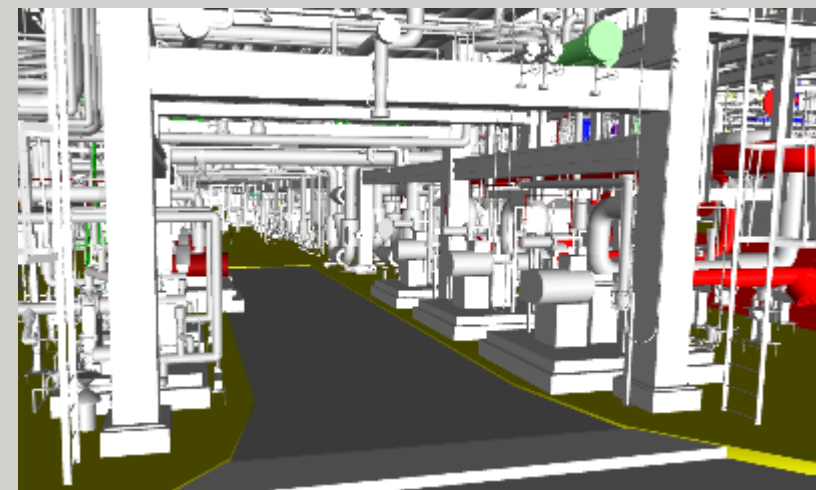


NEW INDUSTRIAL PLANTS



3D MODEL WITH HIGH DEFINITION OF DETAILS.

**REDUCTION OF TIME NEEDED FOR PREPARATION
REPRESENTATION OF THE INTERFERENCE STUDY.**



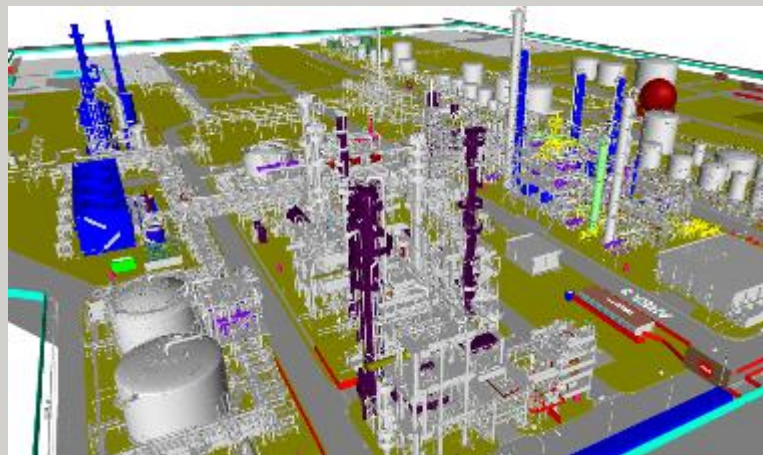


**CEPSA TURNAROUND
METHODOLOGY 4.0**

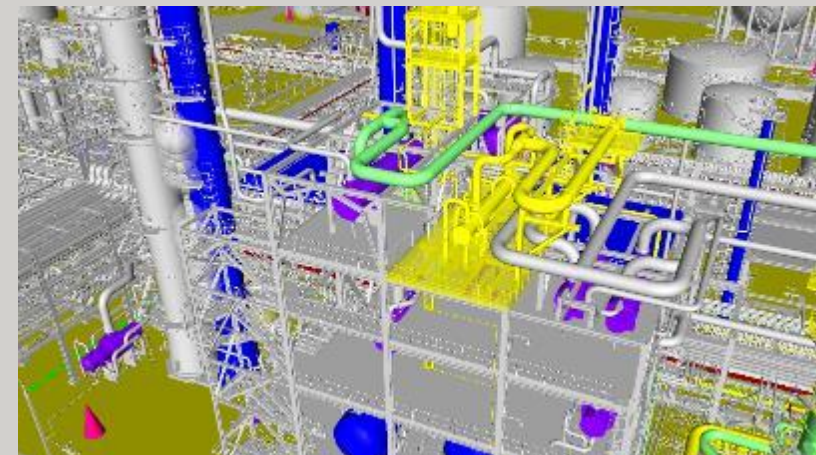
3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

**3D MODELS
PREVIOUS WORKS**



NEW INDUSTRIAL PLANTS



3D MODEL WITH HIGH DEFINITION OF DETAILS.

**REDUCTION OF TIME NEEDED FOR PREPARATION
REPRESENTATION OF THE INTERFERENCE STUDY.**

**REPRESENTATION CRITERIA HAVE BEEN DEFINED AS
EXPLAINED FOR OLD INDUSTRIAL PLANTS**



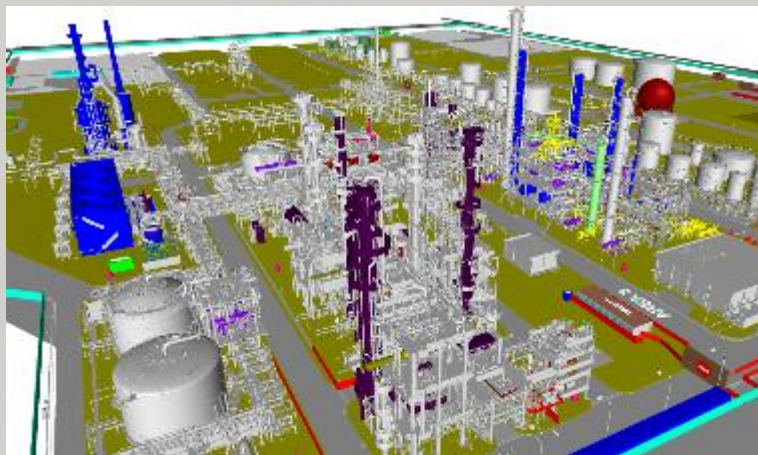
IMPLEMENTATION STAGES (GRAPHIC REPRESENTATION)	
	WELDING / PLACEMENT DCCC
	METALLURGICAL WORKS (Without Crane Intervention)
	METALLURGICAL WORKS (With Crane Intervention)
	HYDRAULIC TESTS (Sphere)
	X-RAYS (Sphere)
	TIE-IN (Sphere)
	UNIT DCCC / REMOVAL DCCC (Equipment - Sphere)
	WORKS WITH ASBESTOS (Equipment)
	AUXILIARY WORK (Sphere)
	THERMOWELL (Sphere)



NEW INDUSTRIAL PLANTS

3D MODELS

PREVIOUS WORKS



NEW INDUSTRIAL PLANTS

3D MODEL WITH HIGH DEFINITION OF DETAILS.

REDUCTION OF TIME NEEDED FOR PREPARATION REPRESENTATION OF THE INTERFERENCE STUDY.

REPRESENTATION CRITERIA HAVE BEEN DEFINED AS EXPLAINED FOR OLD INDUSTRIAL PLANTS

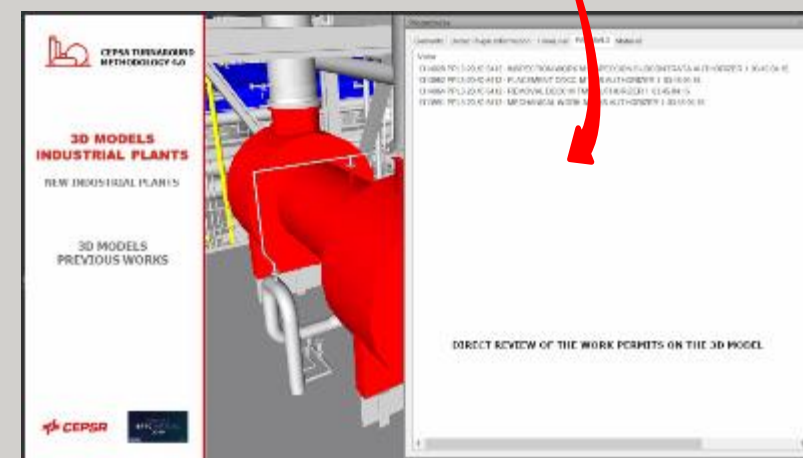
DIRECT LOAD OF WORK PERMIT MANAGEMENT ABOUT EACH EQUIPMENT OF THE 3D MODEL



WORK PERMIT MANAGEMENT

[illegible]

AUTOMATIC LINKING IN THE 3D MODEL

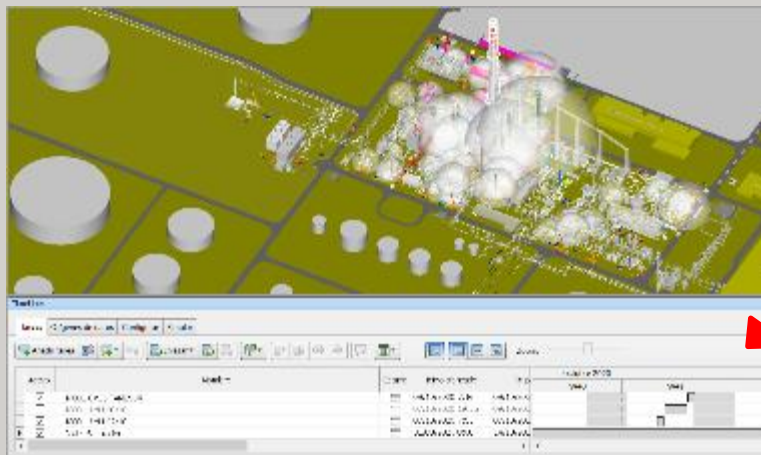




CEPSA TURNAROUND METHODOLOGY 4.0

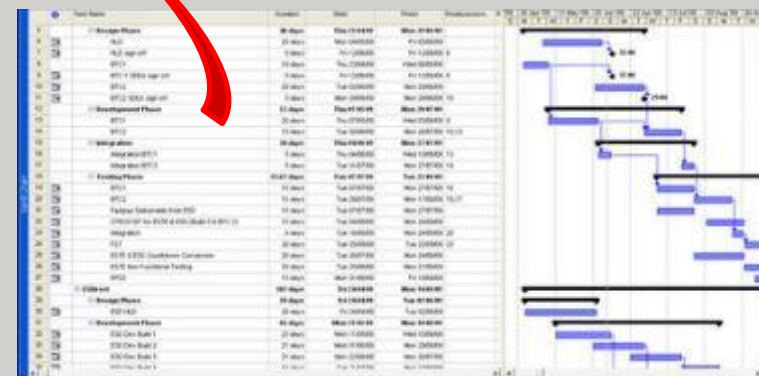
DAILY INTERFERENCE MEETING

3D MODELS DURING WORKS



3D INTERFERENCE MODEL

AUTOMATIC LINKING
IN THE 3D MODEL



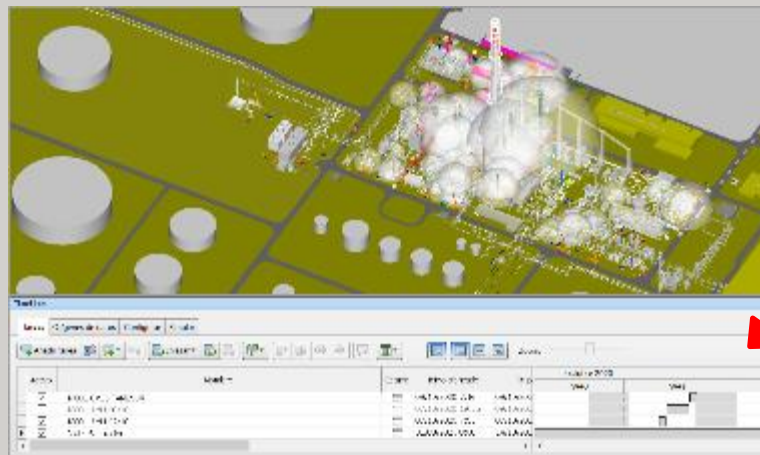
UPDATED PLANNING

DAILY PLANNING UPDATE ACCORDING TO THE
PROGRESS OF EACH CONTRACT.



DAILY INTERFERENCE MEETING

3D MODELS DURING WORKS



3D INTERFERENCE MODEL

AUTOMATIC LINKING IN THE 3D MODEL

[illegible]

DAILY WORK PERMITS

DAILY PLANNING UPDATE ACCORDING TO THE PROGRESS OF EACH CONTRACT.

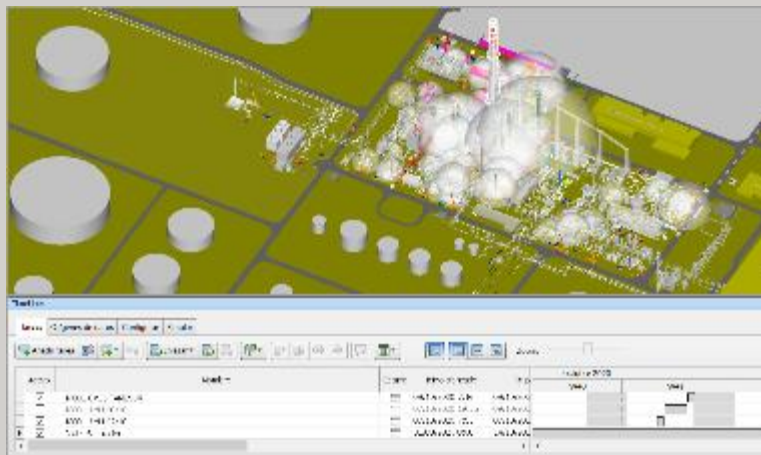
AUTOMATIC UPLOADING OF DAILY WORK PERMITS.



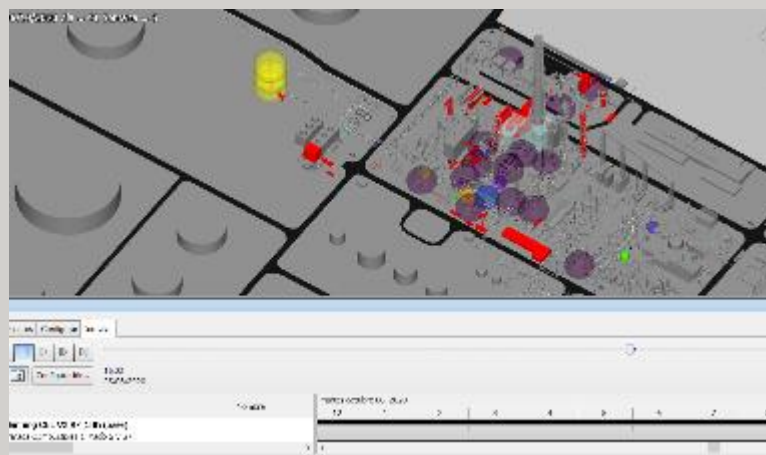


DAILY INTERFERENCE MEETING

3D MODELS DURING WORKS



3D INTERFERENCE MODEL



**3D INTERFERENCE MODEL
(SIMULATION INTERFERENCES)**

**DAILY PLANNING UPDATE ACCORDING TO THE
PROGRESS OF EACH CONTRACT.**

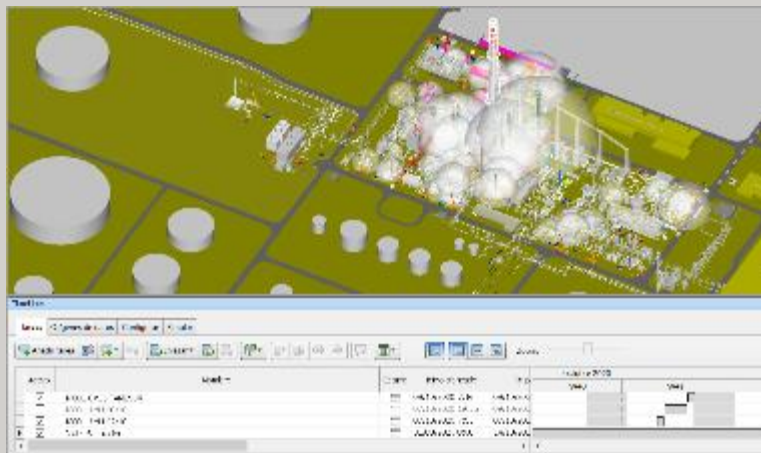
AUTOMATIC UPLOADING OF DAILY WORK PERMITS.

REVIEW OF THE NEXT WORK SHIFT

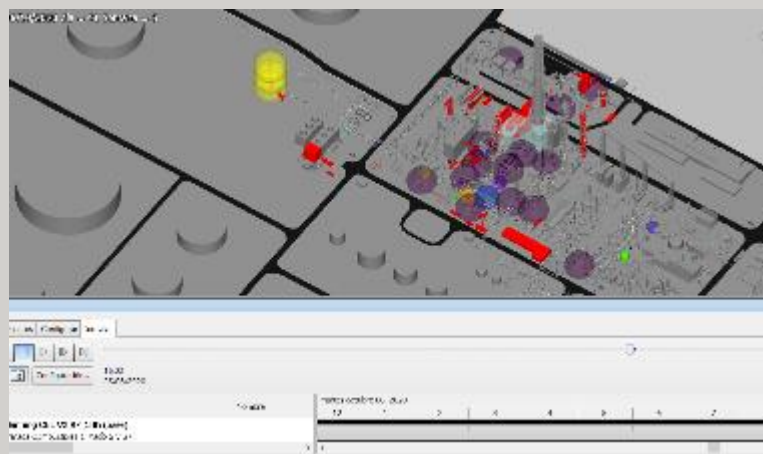


DAILY INTERFERENCE MEETING

3D MODELS DURING WORKS



3D INTERFERENCE MODEL



**3D INTERFERENCE MODEL
(SIMULATION INTERFERENCES)**

IMPLEMENTATION STAGES (GRAPHIC REPRESENTATION)	
	VAPORIZATION / PLACEMENT DDCC
	METALLURGICAL WORKS (Without Crane Intervention)
	METALLURGICAL WORKS (With Crane Intervention)
	HYDRAULIC TESTS (Sphere)
	X-RAYS (Sphere)
	TIE-IN (Sphere)
	UNIT DDCC / REMOVAL DDCC (Equipment - Sphere)
	WORKS WITH ASBESTOS (Equipment)
	AUXILIARY WORK (Sphere)
	THERMOWELL (Sphere)

ACCORDING TO THE REPRESENTATION CRITERIA SET OUT

**DAILY PLANNING UPDATE ACCORDING TO THE
PROGRESS OF EACH CONTRACT.**

AUTOMATIC UPLOADING OF DAILY WORK PERMITS.

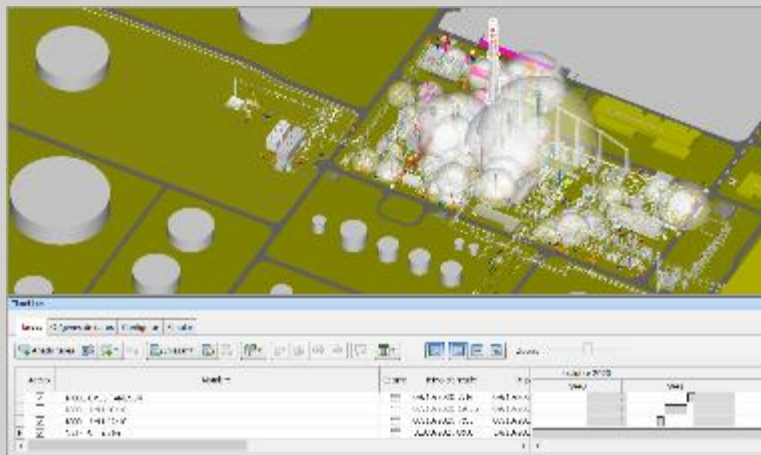
REVIEW OF THE NEXT WORK SHIFT

LOGISTICS

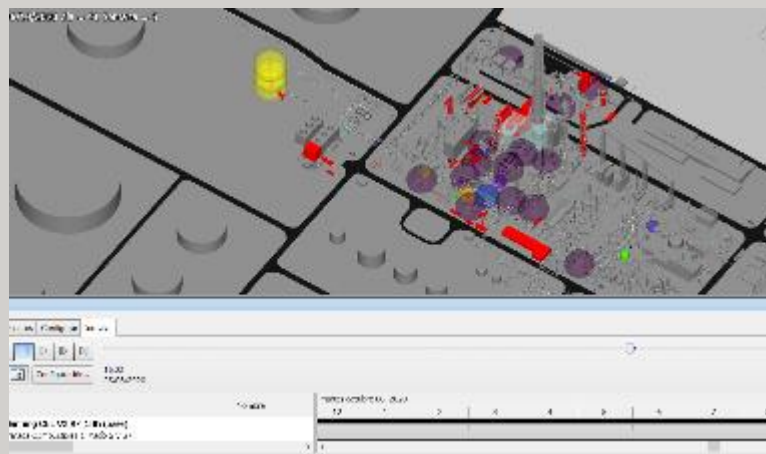


DAILY INTERFERENCE MEETING

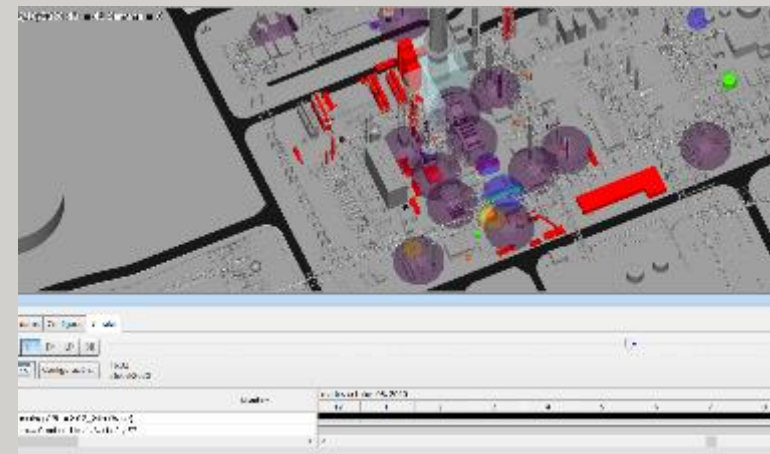
3D MODELS DURING WORKS



3D INTERFERENCE MODEL



**3D INTERFERENCE MODEL
(SIMULATION INTERFERENCES)**



**REVIEW OF LOGISTICS AND POSSIBLE INTERFERENCES IN
EACH PLANT AREA**

**DAILY PLANNING UPDATE ACCORDING TO THE
PROGRESS OF EACH CONTRACT.**

AUTOMATIC UPLOADING OF DAILY WORK PERMITS.

REVIEW OF THE NEXT WORK SHIFT

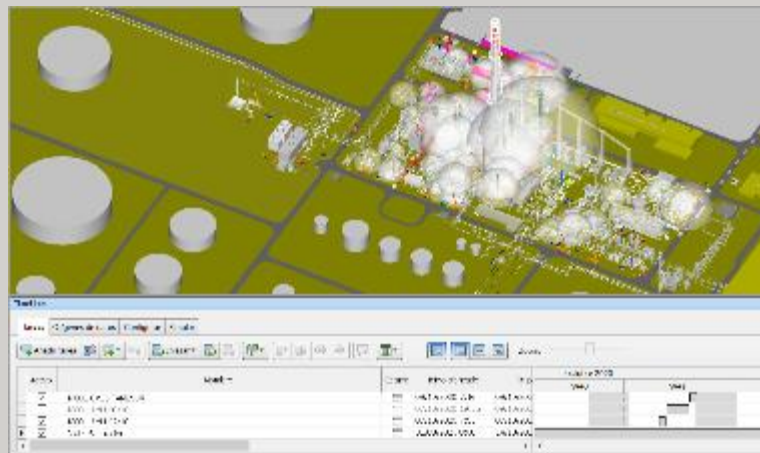
LOGISTICS



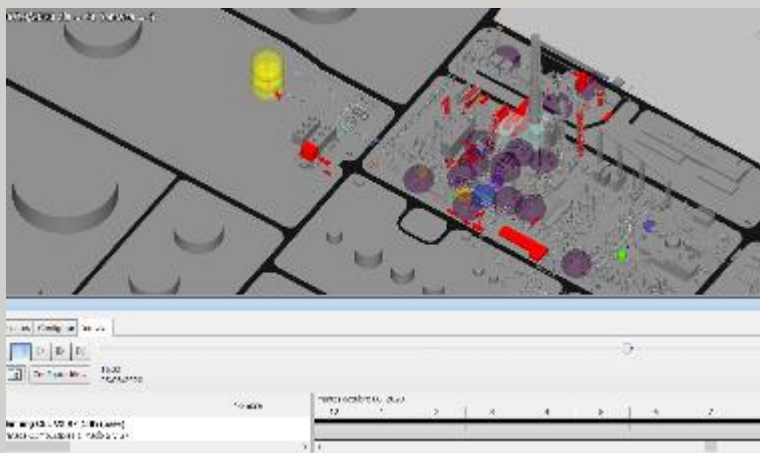
CEPSA TURNAROUND METHODOLOGY 4.0

DAILY INTERFERENCE MEETING

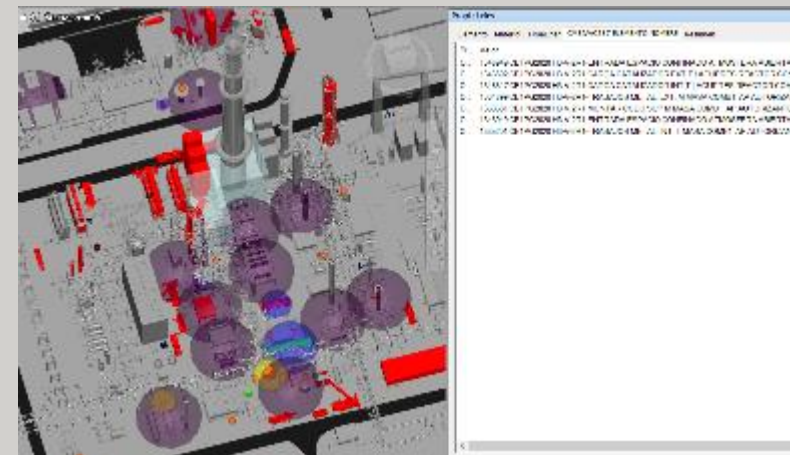
3D MODELS DURING WORKS



3D INTERFERENCE MODEL



3D INTERFERENCE MODEL
(SIMULATION INTERFERENCES)



REVIEW OF WORK PERMITS DIRECTLY ON THE 3D MODEL

DAILY PLANNING UPDATE ACCORDING TO THE
PROGRESS OF EACH CONTRACT.

AUTOMATIC UPLOADING OF DAILY WORK PERMITS.

REVIEW OF THE NEXT WORK SHIFT

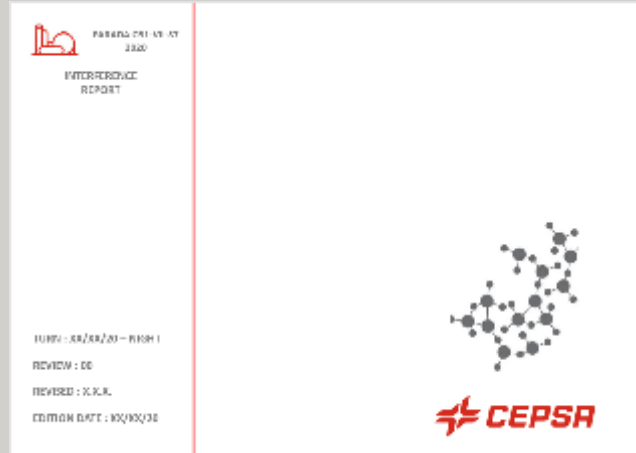
DAILY WORK PERMITS



CEPSA TURNAROUND METHODOLOGY 4.0

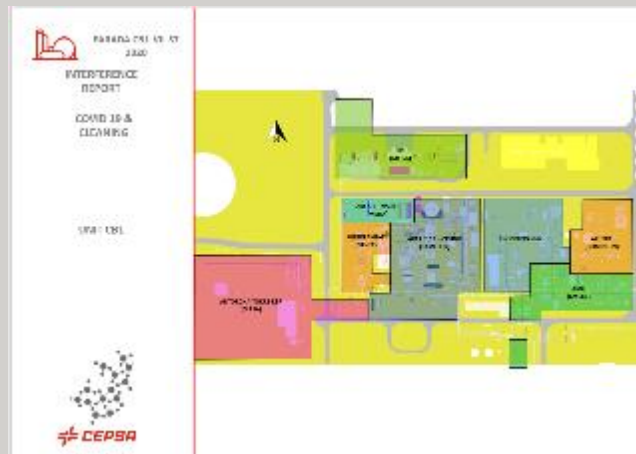
DAILY INTERFERENCE REPORT

3D MODELS DURING WORKS



COVER.

INDICATING DATE AND SHIFT



GENERAL DESCRIPTION OF AREAS

WORK AREAS, COVID19 & CLEANING,
GENERIC PERMITS AREAS...



EXECUTION PHASES.

ACCORDING TO THE REPRESENTATION
CRITERIA SET OUT

IMPLEMENTATION STAGES (GRAPHIC REPRESENTATION)	
	VAPORIZATION / PLACEMENT DCCC
	METALLURGICAL WORKS (Without Crane Intervention)
	METALLURGICAL WORKS (With Crane Intervention)
	HYDRAULIC TESTS (Sphere)
	X-RAYS (Sphere)
	TIE-IN (Sphere)
	UNIT DCCC / REMOVAL DCCC (Equipment - Sphere)
	WORKS WITH ASBESTOS (Equipment)
	AUXILIARY WORK (Sphere)
	THERMOWELL (Sphere)

DAILY BEFORE INTERFERENCE MEETINGS REPORTS
ARE ISSUED.

ARE DIVIDED INTO 4 MAIN BLOCKS OF INFORMATION

REVIEW OF THE NEXT WORK SHIFT

GENERAL INFORMATION

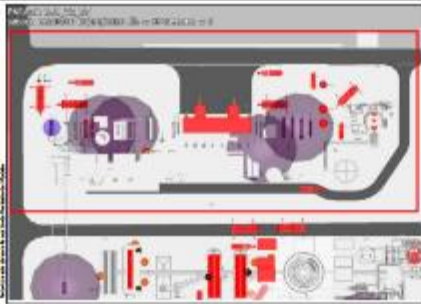


CEPSA TURNAROUND METHODOLOGY 4.0

DAILY INTERFERENCE REPORT

3D MODELS DURING WORKS



CEPSA		PARADA CB1-VII-57 REVISIÓN DE INTERFERENCIAS	TURNO	DÍA - 03/10/20
			REVISIÓN	0
			REVISADO	J.A.M.V
TAG : 527 UNIDAD : CB1 ITDA : CB1 GENERAL ÁREA : H3 ESTADO : New				
				
TAG : 707 UNIDAD : CB1 ITDA : H3 GENERAL DISCIPLINA : COORDINACIÓN DE GRÚAS - TRABAJOS ESTADO : New				
				
LOGÍSTICA GR M-003.003/MONTAJA/Desmonte arbores CV M-CV.003/MONTAJA/Impulso de haz tubular CV M-CV.003/MONTAJA/Impulso de haz tubular GR M-003.003/MONTAJA/Desmonte arbores GR L-000.003/LUGAR PRESURIZADO + LSS CV M-CV.003/HERRAMIENTAS CV M-CV.003/HERRAMIENTAS GR L-000.003/HERRAMIENTAS				

LOGISTICS.

LOCATION OF THE AREA SHOWN

CRANE-TEAM COORDINATION BY AREA (INFO.)

- CRANE CODING
- TEAM WE WORK WITH
- JOB DESCRIPTION

DAILY BEFORE INTERFERENCE MEETINGS REPORTS
ARE ISSUED.

ARE DIVIDED INTO 4 MAIN BLOCKS OF INFORMATION

REVIEW OF THE NEXT WORK SHIFT

LOGISTICS INFORMATION



DAILY INTERFERENCE REPORT

3D MODELS DURING WORKS

[illegible]

WORK PERMITS.

LOCATION OF THE AREA SHOWN

DAILY WORK PERMITS (INFO.)

- PERMIT NUMBER
- COMPANY
- TIME
- AUTHORISING
- STATE

**DAILY BEFORE INTERFERENCE MEETINGS REPORTS
ARE ISSUED.**

ARE DIVIDED INTO 4 MAIN BLOCKS OF INFORMATION

REVIEW OF THE NEXT WORK SHIFT

WORK PERMITS



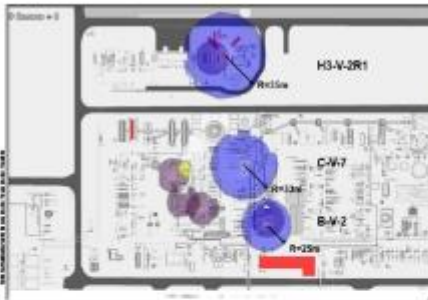
CEPSA TURNAROUND METHODOLOGY 4.0

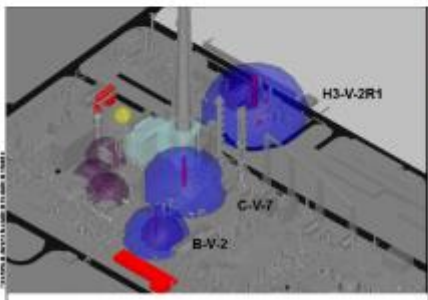
DAILY INTERFERENCE REPORT

3D MODELS DURING WORKS



CEPSA		PARADA CB1-VII-57 REVISIÓN DE INTERFERENCIAS	TURNO	DÍA - 04/10/20
			REVISIÓN	0
			REVISADO	J.A.M.V

TAG: UNIDAD: CB1 ITEM: ÁREA CRUDO - GENERAL DISCIPLINA: PRUEBAS HIDRÁULICAS ESTADO: NEW		PH_ÁREA CRUDO - GENERAL PH_C-V-7[TANQUESUR] PH_B-V-2[TANQUESUR] Nota Previenda de pruebas entre 12,00h - 14,00h.
---	--	--

TAG: UNIDAD: CB1 ITEM: ÁREA CRUDO - GENERAL DISCIPLINA: PRUEBAS HIDRÁULICAS ESTADO:		PH_ÁREA CRUDO - GENERAL PH_C-V-7[TANQUESUR] PH_B-V-2[TANQUESUR] Nota Previenda de pruebas entre 12,00h - 14,00h.
---	--	--

HYDRAULIC TESTS / RX.

LOCATION OF THE AREA SHOWN TESTS (INFO.)

- EQUIPMENT ON WHICH THE TEST IS PERFORMED
- BEACONING RADIUS
- SCHEDULED TIME OF THE TEST
- COMPANY IN CHARGE OF THE IMPLEMENTATION
- NOTES/COMMENTS

DAILY BEFORE INTERFERENCE MEETINGS REPORTS
ARE ISSUED.

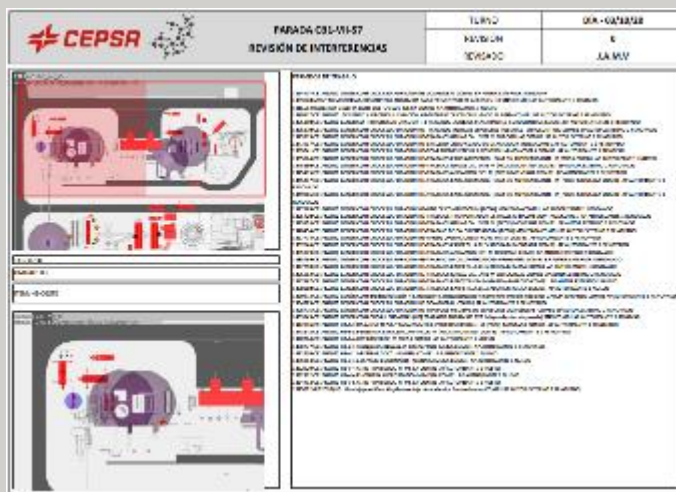
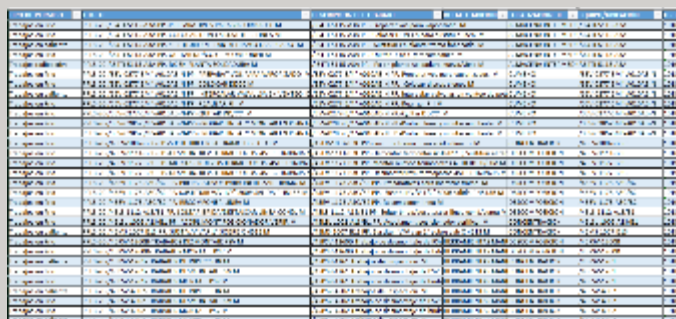
ARE DIVIDED INTO 4 MAIN BLOCKS OF INFORMATION

REVIEW OF THE NEXT WORK SHIFT

HYDRAULIC TESTS / RX.



3D MODELS DURING WORKS



SIGNING TIMES ARE ASSIGNED BY AUTHORIZER AND CONTRACTING COMPANY.

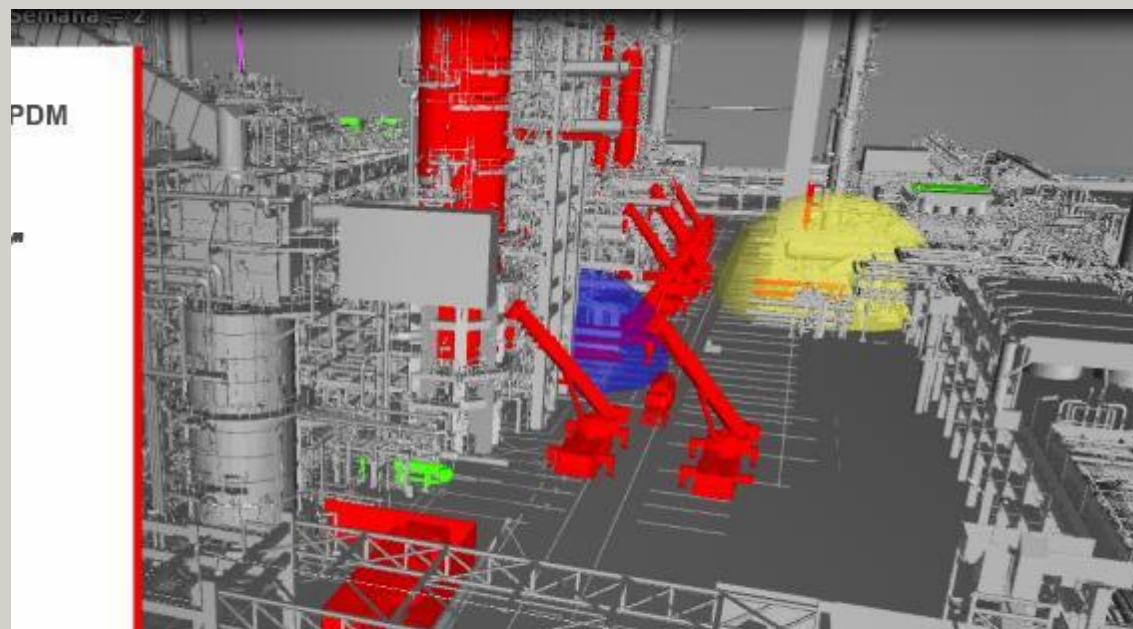
QUEUE MANAGEMENT



CEPSA TURNAROUND METHODOLOGY 4.0

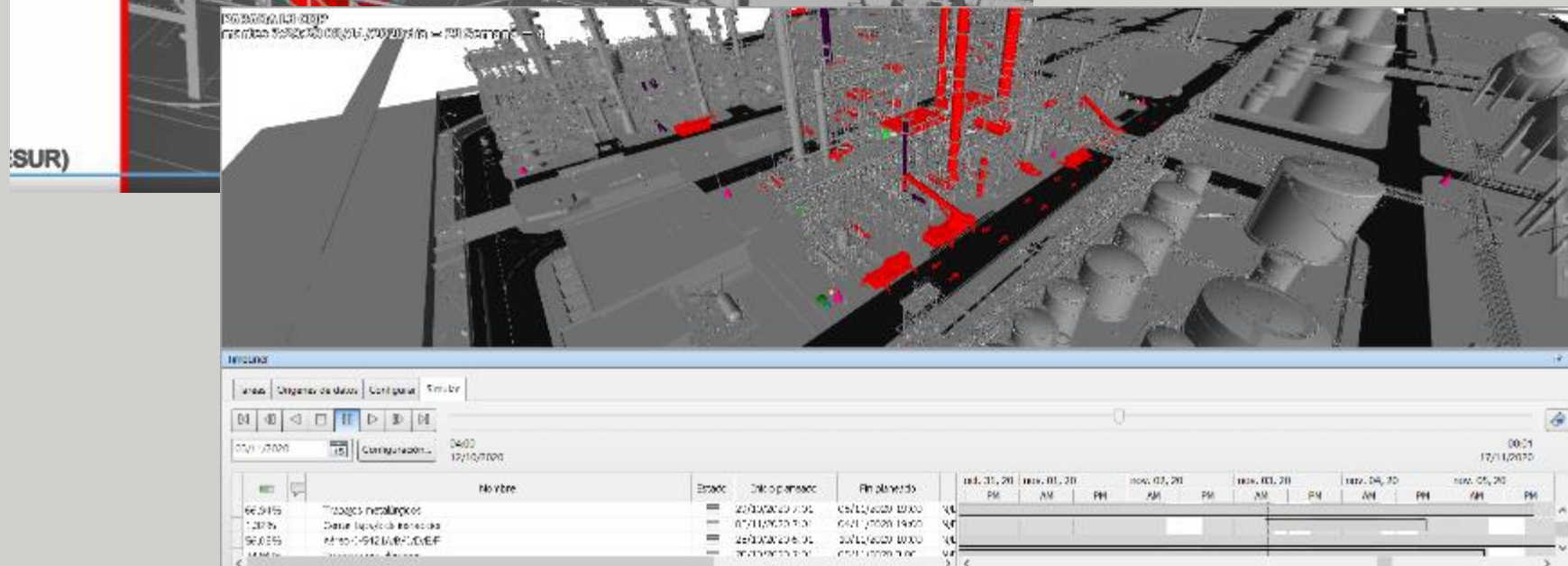
HISTORICAL TIMELINER

3D MODELS POST WORKS



FINAL 3D MODEL WITH OVERVIEW OF WORK PROGRESS.

- FINAL PLANNING
- WORK PERMITS
- EQUIPMENT IMPLEMENTATIONS
- HYDRAULIC TESTS / X-RAYS
-





LESSONS LEARNED

3D MODELS
POST WORKS

KNOWLEDGE GAINED FROM EXPERIENCE DURING THE WORK

KNOWLEDGE GAINED DURING A PROJECT WHICH SHOWS HOW PROJECT EVENTS WERE ADDRESSED OR SHOULD BE ADDRESSED IN THE FUTURE, IN ORDER TO IMPROVE FUTURE PERFORMANCE.

CEPSA									
RECORD OF LESSONS LEARNED									
Item	Description	Location	Year	Project	Area	Impact	Resolution	Prevention	Follow-up
1	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	London	2019	CEPSA	Turnaround	High	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.
2	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	London	2019	CEPSA	Turnaround	High	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.
3	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	London	2019	CEPSA	Turnaround	High	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.
4	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	London	2019	CEPSA	Turnaround	High	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.	During the execution of the project, it was observed that the execution of the work was not planned in advance, which caused delays in the execution of the work.

RECORD OF LESSONS LEARNED



LESSONS LEARNED

3D MODELS POST WORKS

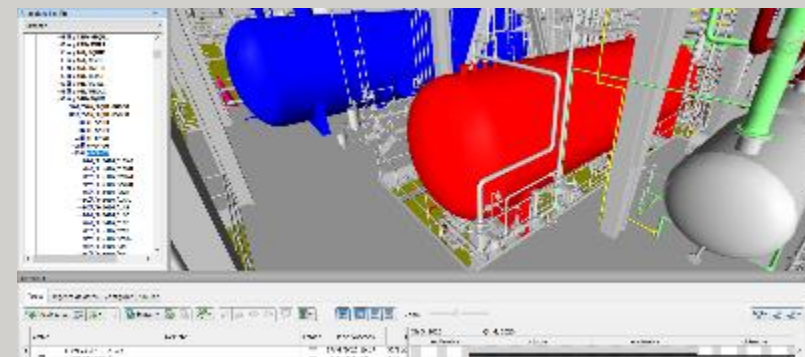
KNOWLEDGE GAINED FROM EXPERIENCE DURING THE WORK

KNOWLEDGE GAINED DURING A PROJECT WHICH SHOWS HOW PROJECT EVENTS WERE ADDRESSED OR SHOULD BE ADDRESSED IN THE FUTURE, IN ORDER TO IMPROVE FUTURE PERFORMANCE.

THE RECORD OF LESSONS LEARNED IS STORED IN EACH PART OF THE 3D MODEL, SO THAT IT CAN BE TAKEN INTO ACCOUNT IN FUTURE WORK.

CEPSA									
Item	Location	Area	Phase	Activity	Responsible	Start Date	End Date	Status	Comments
1	Refinery	Process	Turnaround	Process	Process	2020-01-01	2020-01-01	Completed	Process
2	Refinery	Process	Turnaround	Process	Process	2020-01-01	2020-01-01	Completed	Process
3	Refinery	Process	Turnaround	Process	Process	2020-01-01	2020-01-01	Completed	Process
4	Refinery	Process	Turnaround	Process	Process	2020-01-01	2020-01-01	Completed	Process
5	Refinery	Process	Turnaround	Process	Process	2020-01-01	2020-01-01	Completed	Process
6	Refinery	Process	Turnaround	Process	Process	2020-01-01	2020-01-01	Completed	Process
7	Refinery	Process	Turnaround	Process	Process	2020-01-01	2020-01-01	Completed	Process
8	Refinery	Process	Turnaround	Process	Process	2020-01-01	2020-01-01	Completed	Process
9	Refinery	Process	Turnaround	Process	Process	2020-01-01	2020-01-01	Completed	Process
10	Refinery	Process	Turnaround	Process	Process	2020-01-01	2020-01-01	Completed	Process

RECORD OF LESSONS LEARNED



3D MODEL



CEPSA TURNAROUND
METHODOLOGY 4.0

LESSONS LEARNED

3D MODELS
POST WORKS



Propiedades

ElementoUnitec Plugin InformationTimeLinerLESSONS LEARNEDMaterial

Valor

TURN 01/10

PPL3-20 / F-5407 - Need to do pH because you can't see anything inspected when you enter. FAYSOL ✓

PPL3-20 / F-5407 - Major leakage problems detected in the delivery of new beams by the contractor. TMS

TURN 02/10

PPL3-20 / F-5407 - The emergency generator is detected without starting, seems to be a card problem. FAYSOL

PPL3-20 / F-5407 - It doesn't coincide with the expected times as it has a lot of water in plates accumulated. HYDROKNOCK ✓

EQUIPMENT	DESCRIPTION	COMPANY
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< >

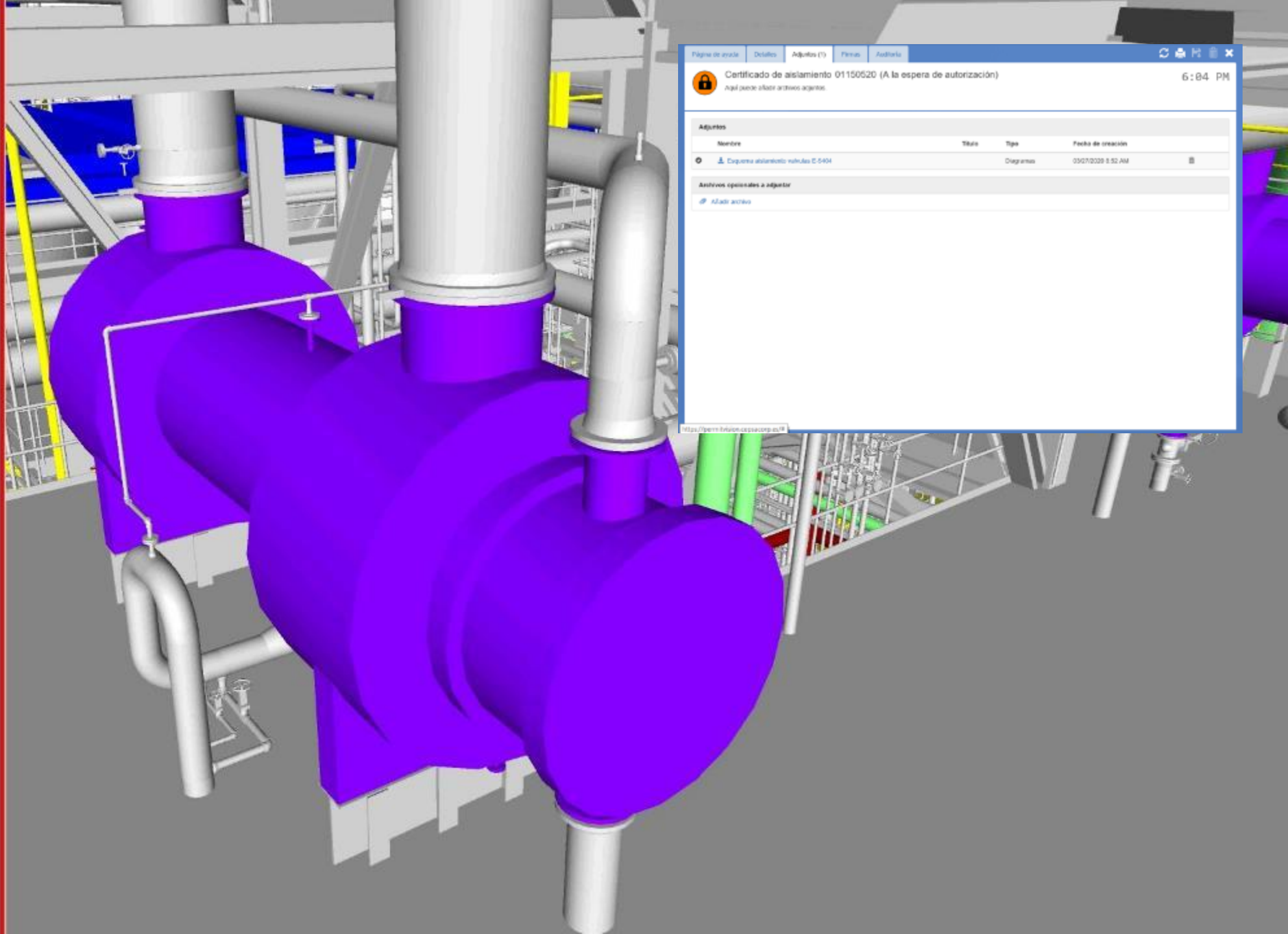


**CEPSA TURNAROUND
METHODOLOGY 4.0**

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



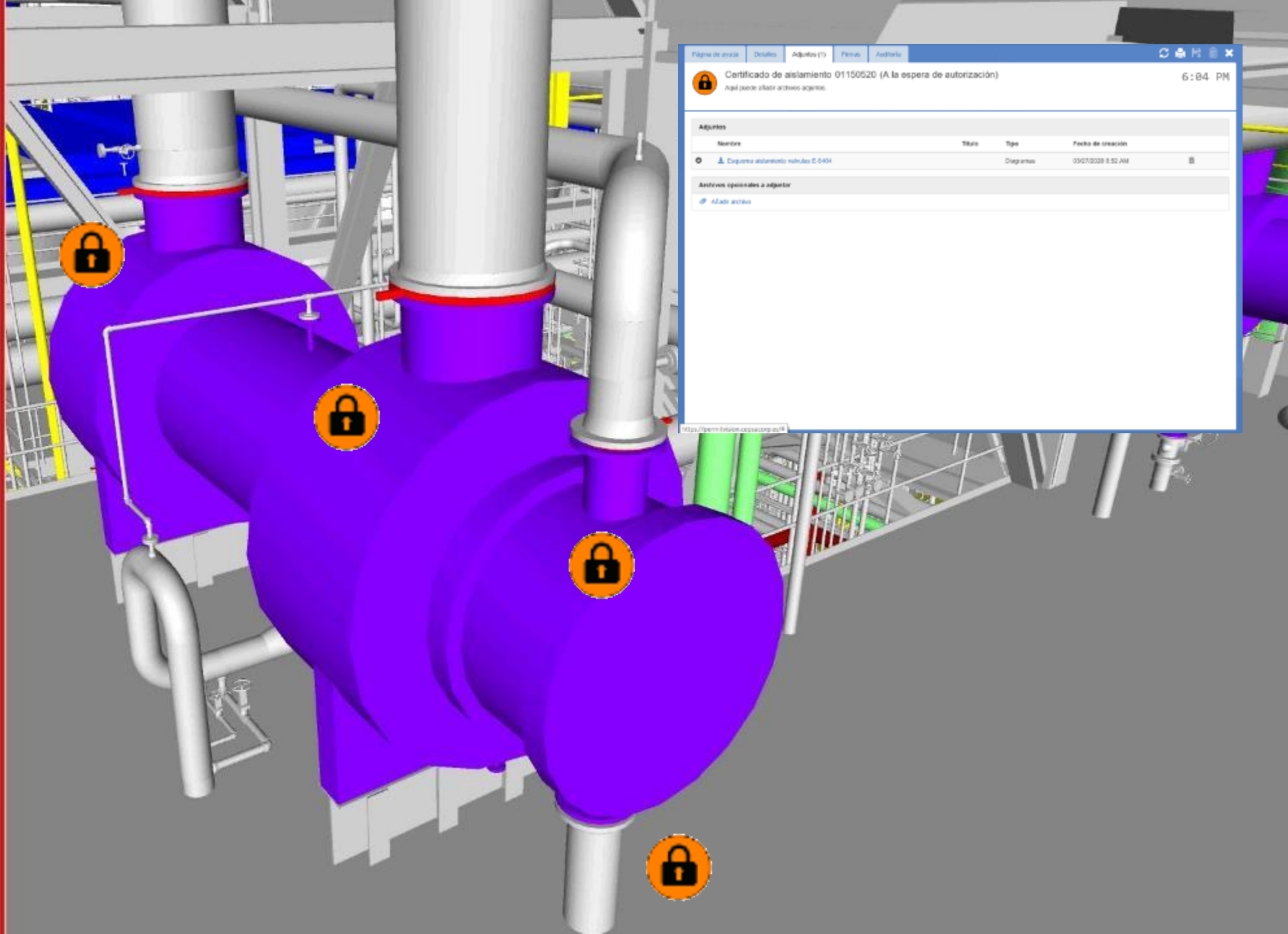


**CEPSA TURNAROUND
METHODOLOGY 4.0**

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



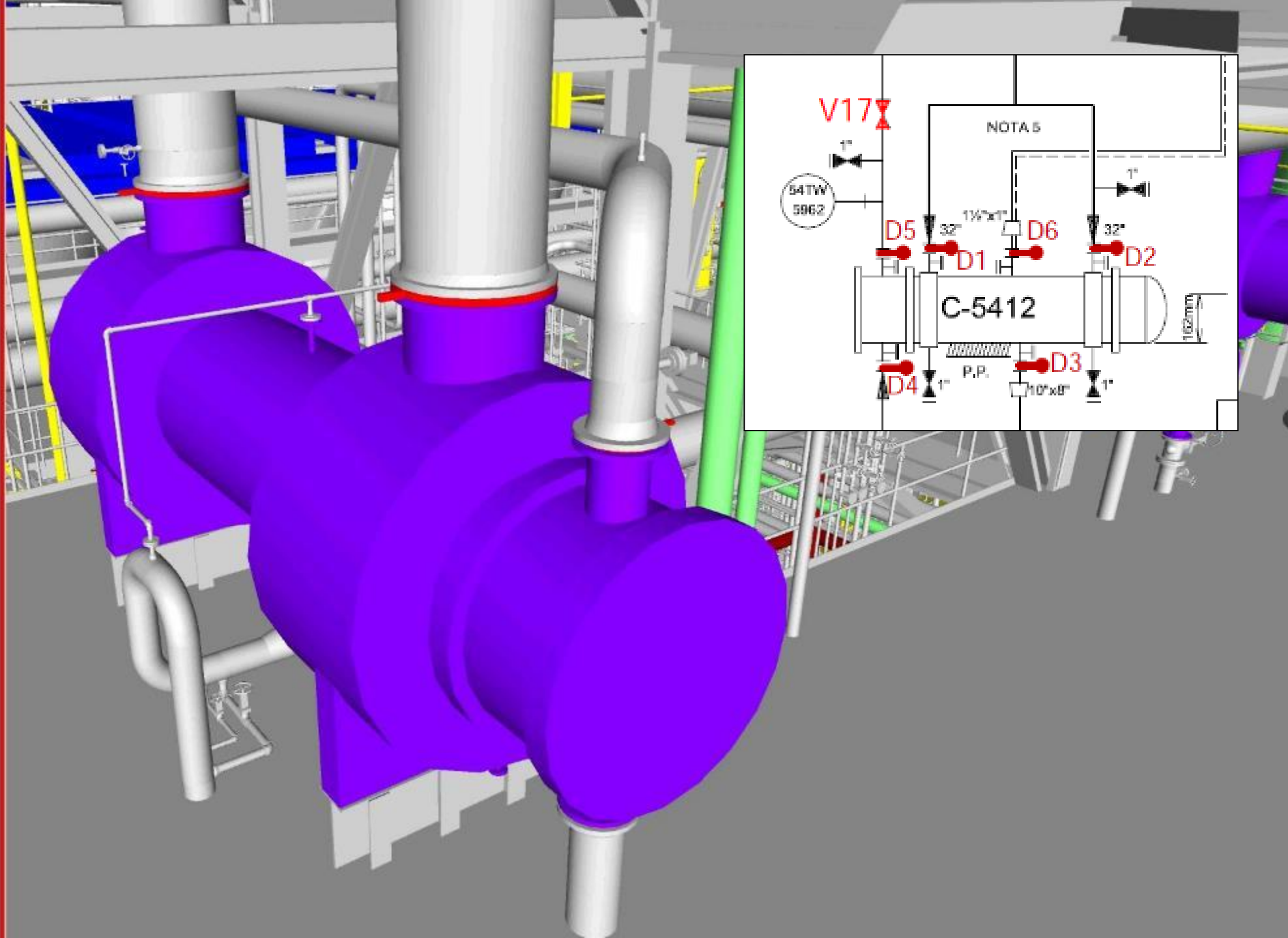


CEPSA TURNAROUND
METHODOLOGY 4.0

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



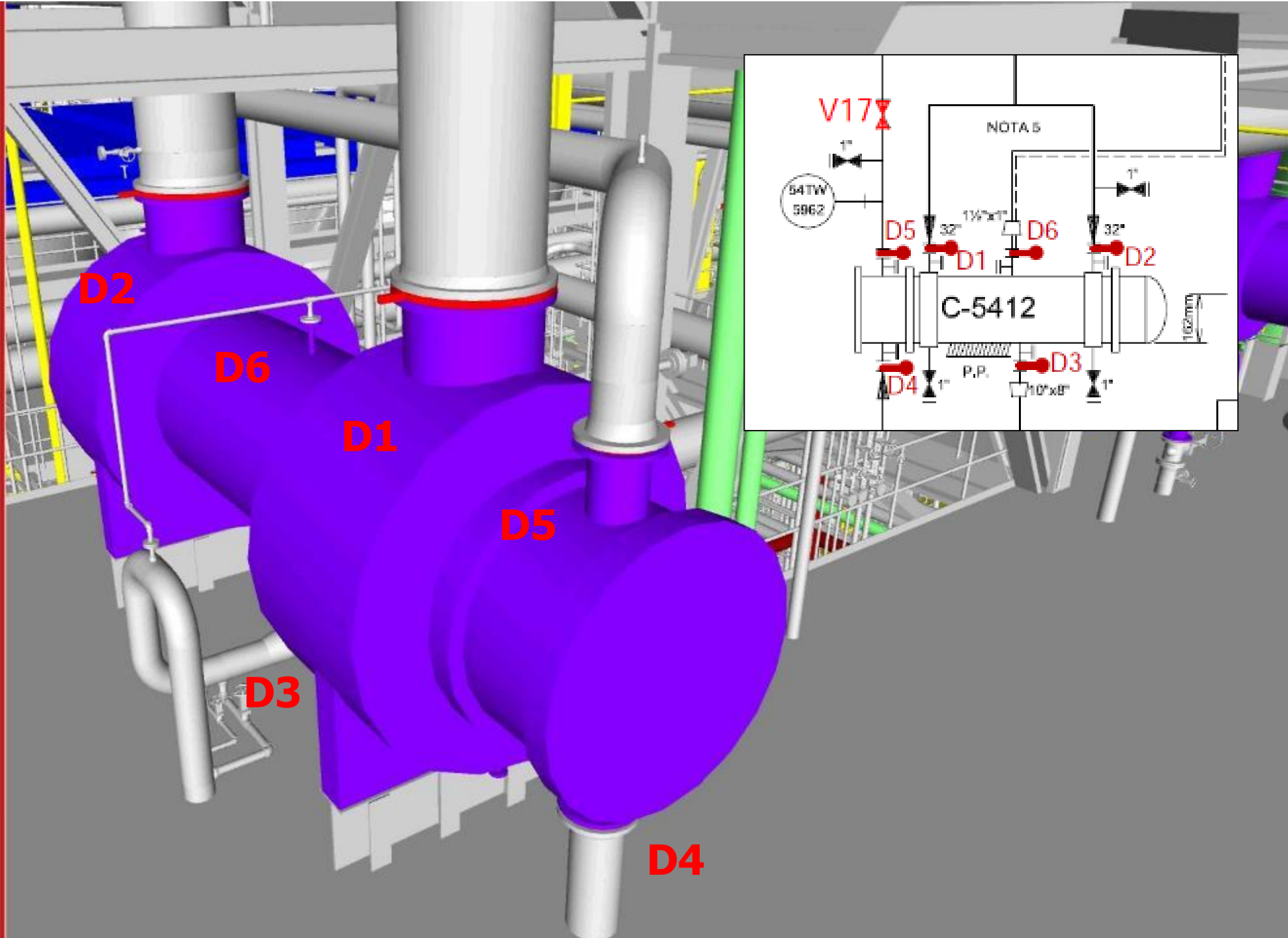


CEPSA TURNAROUND
METHODOLOGY 4.0

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



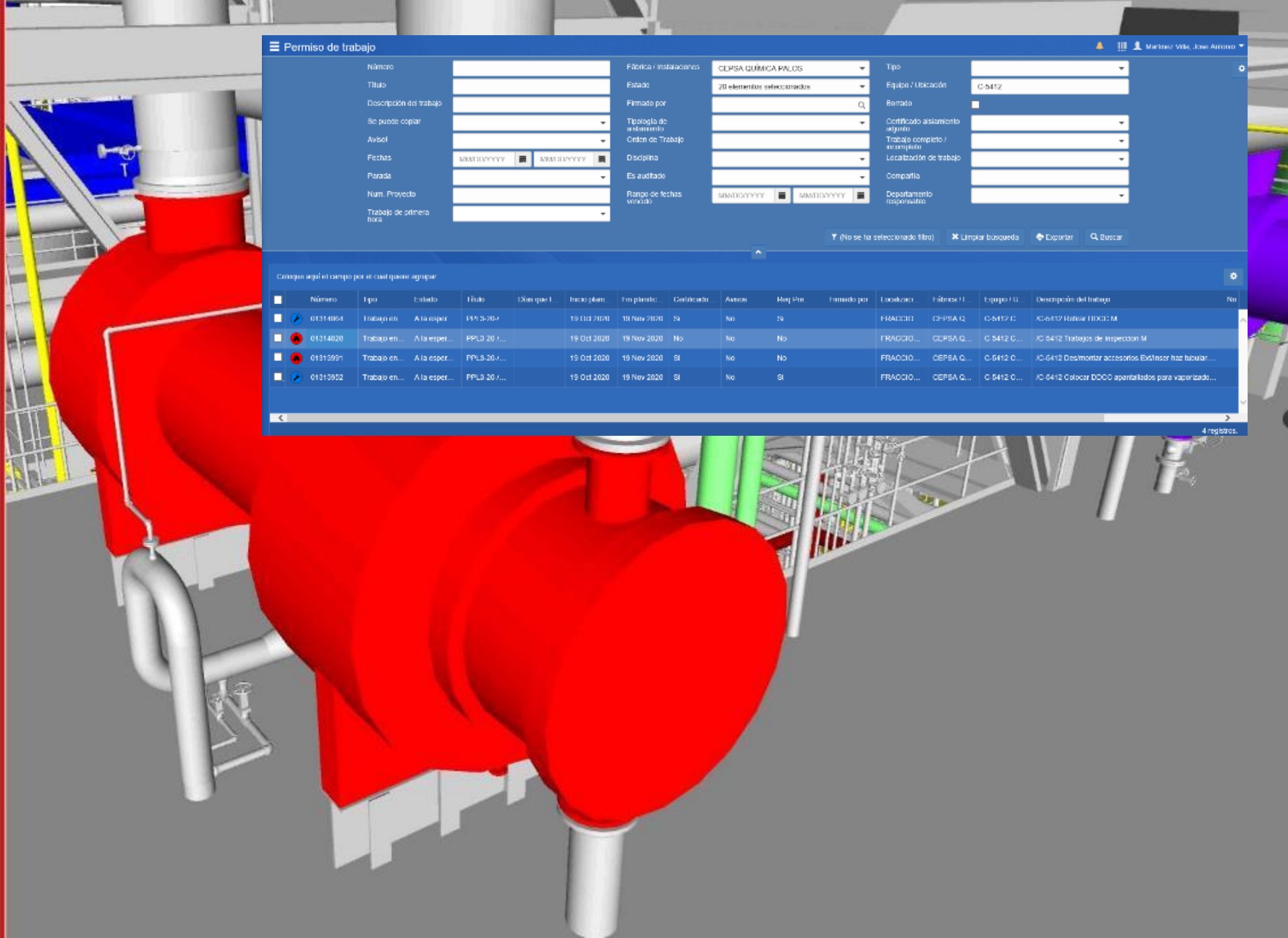


CEPSA TURNAROUND
METHODOLOGY 4.0

3D MODELS
INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



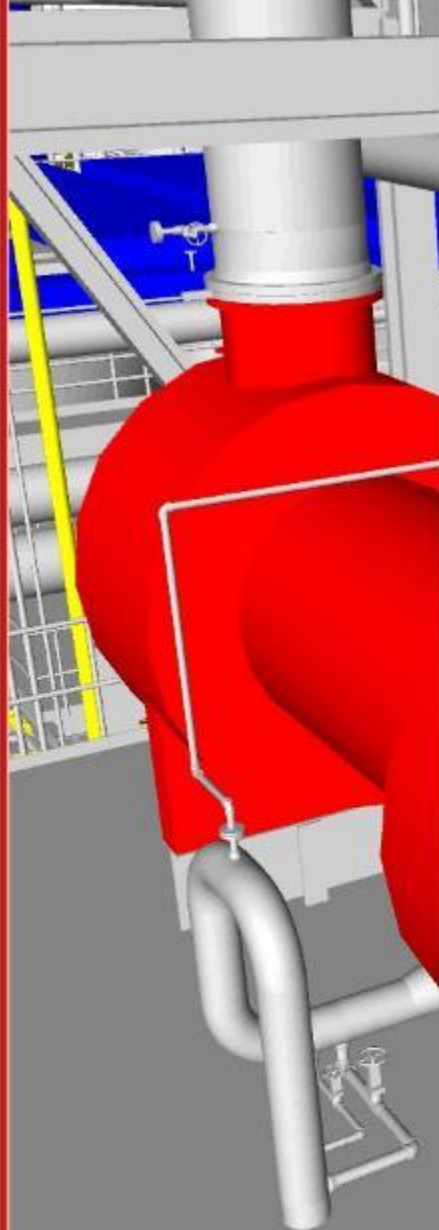


**CEPSA TURNAROUND
METHODOLOGY 4.0**

**3D MODELS
INDUSTRIAL PLANTS**

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



Propiedades

Elemento Unitec Plugin Information TimeLiner **WORK PERMITS** Material

Valor
1314028 PPL3-20-/C-5412 - INSPECTION WORK M OCA AUTHORIZER 1 03:45-04:15
1313952 PPL3-20-/C-5412 - PLACEMENT DDCC M TMS AUTHORIZER 1 03:45-04:15
1313991 PPL3-20-/C-5412 - MECHANICAL WORK M TMS AUTHORIZER 1 03:45-04:15

PERMIT NO.

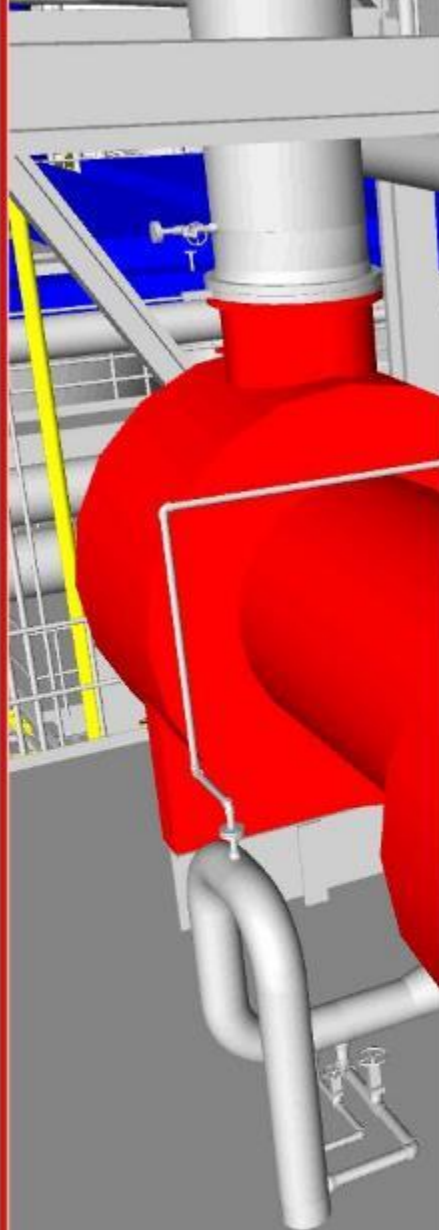


**CEPSA TURNAROUND
METHODOLOGY 4.0**

**3D MODELS
INDUSTRIAL PLANTS**

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



Propiedades				
Elemento	Unitec Plugin Information	TimeLiner	WORK PERMITS	Material
Valor				
131402	PPL3-20-/C-5412 - INSPECTION WORK	M OCA AUTHORIZER 1	03:45-04:15	
131395	PPL3-20-/C-5412 - PLACEMENT DDCC	M TMS AUTHORIZER 1	03:45-04:15	
131399	PPL3-20-/C-5412 - MECHANICAL WORK	M TMS AUTHORIZER 1	03:45-04:15	

DESCRIPTION

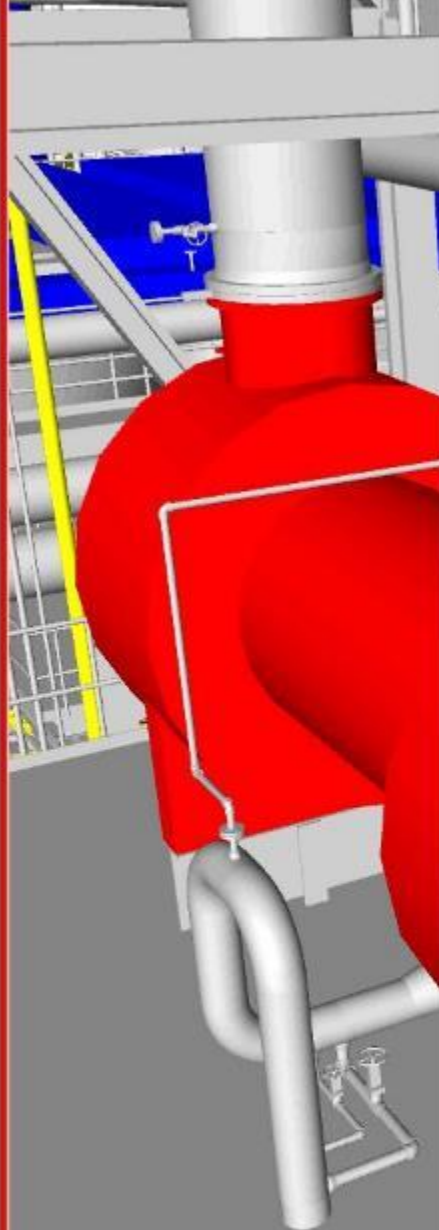


CEPSA TURNAROUND
METHODOLOGY 4.0

**3D MODELS
INDUSTRIAL PLANTS**

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



Propiedades

Elemento Unitec Plugin Information TimeLiner **WORK PERMITS** Material

Valor

1314028 PPL3-20-/C-5412 - INSPECTION WORK	M OCA AUTHORIZER 1	03:45-04:15
1313952 PPL3-20-/C-5412 - PLACEMENT DDCC	M TMS AUTHORIZER 1	03:45-04:15
1313991 PPL3-20-/C-5412 - MECHANICAL WORK	M TMS AUTHORIZER 1	03:45-04:15

TURN

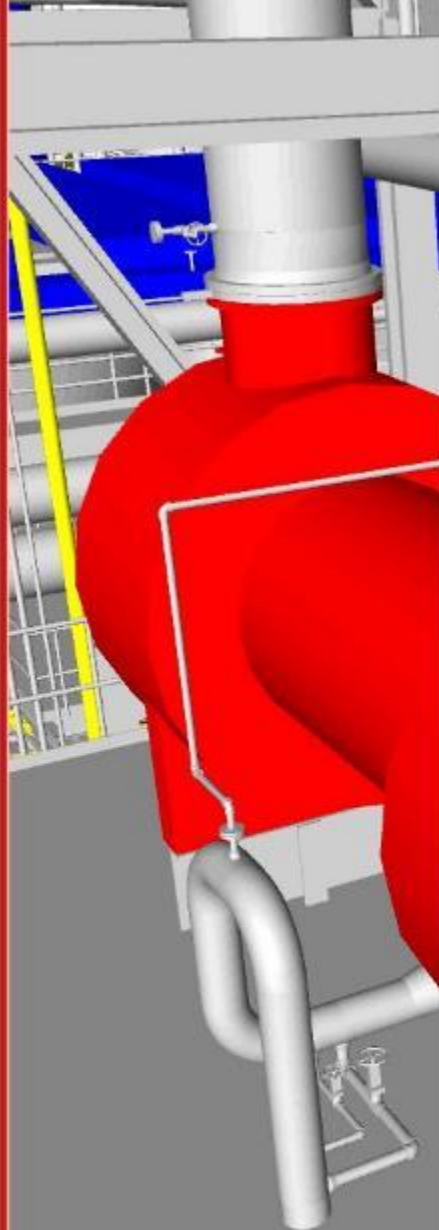


CEPSA TURNAROUND
METHODOLOGY 4.0

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



Propiedades

Elemento Unitec Plugin Information TimeLiner WORK PERMITS Material

Valor

1314028 PPL3-20-/C-5412 - INSPECTION WORK M OCA AUTHORIZER 1 03:45-04:15
1313952 PPL3-20-/C-5412 - PLACEMENT DDCC M TMS AUTHORIZER 1 03:45-04:15
1313991 PPL3-20-/C-5412 - MECHANICAL WORK M TMS AUTHORIZER 1 03:45-04:15

COMPANY

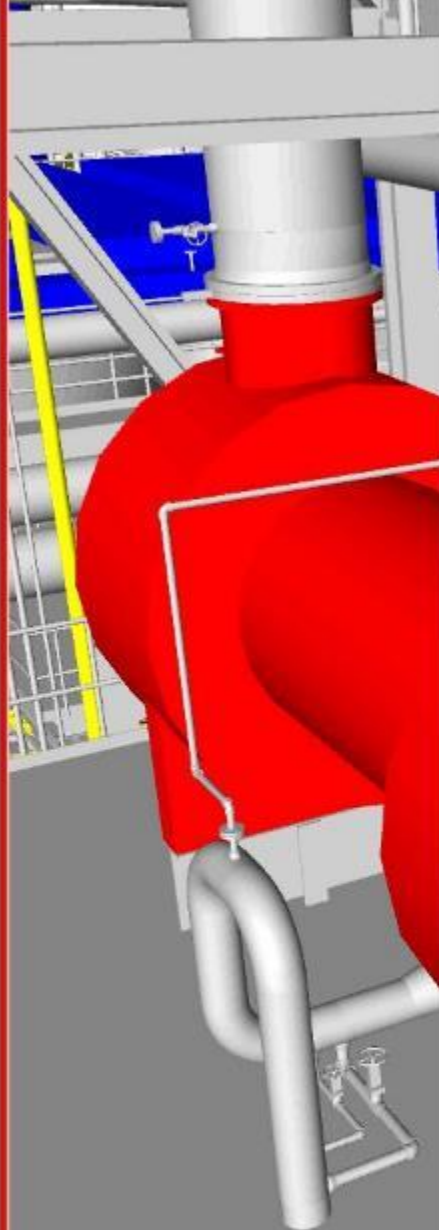


**CEPSA TURNAROUND
METHODOLOGY 4.0**

**3D MODELS
INDUSTRIAL PLANTS**

NEW INDUSTRIAL PLANTS

**3D MODELS
PREVIOUS WORKS**



Propiedades

Elemento Unitec Plugin Information TimeLiner **WORK PERMITS** Material

Valor

1314028 PPL3-20-/C-5412 - INSPECTION WORK M OCA	AUTHORIZER 1	03:45-04:15
1313952 PPL3-20-/C-5412 - PLACEMENT DDCC M TMS	AUTHORIZER 1	03:45-04:15
1313991 PPL3-20-/C-5412 - MECHANICAL WORK M TMS	AUTHORIZER 1	03:45-04:15

AUTHORIZER

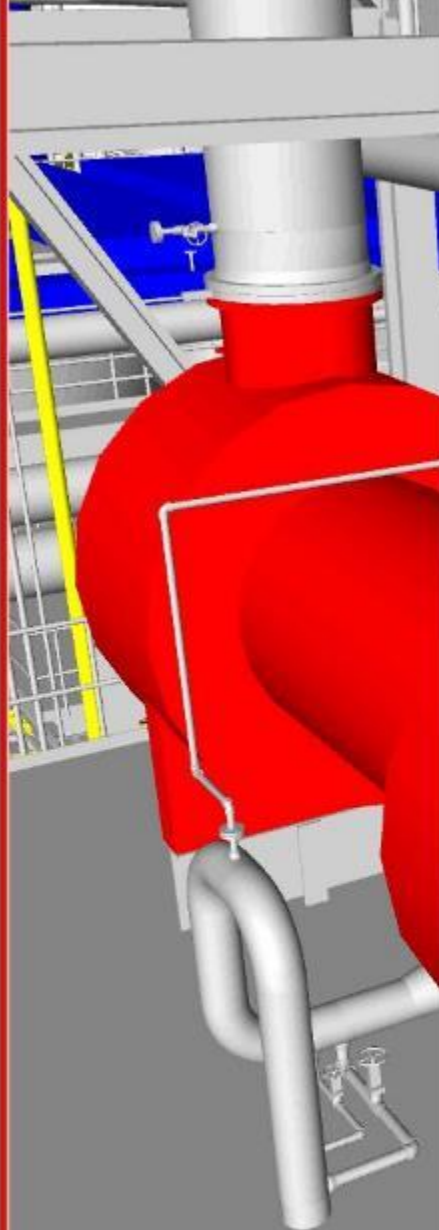


**CEPSA TURNAROUND
METHODOLOGY 4.0**

**3D MODELS
INDUSTRIAL PLANTS**

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



Propiedades

Elemento Unitec Plugin Information TimeLiner WORK PERMITS Material

Valor

1314028 PPL3-20-/C-5412 - INSPECTION WORK M OCA AUTHORIZER	1	03:45-04:15
1313952 PPL3-20-/C-5412 - PLACEMENT DDCC M TMS AUTHORIZER	1	03:45-04:15
1313991 PPL3-20-/C-5412 - MECHANICAL WORK M TMS AUTHORIZER	1	03:45-04:15

**QUEUE
MANAGEMENT**

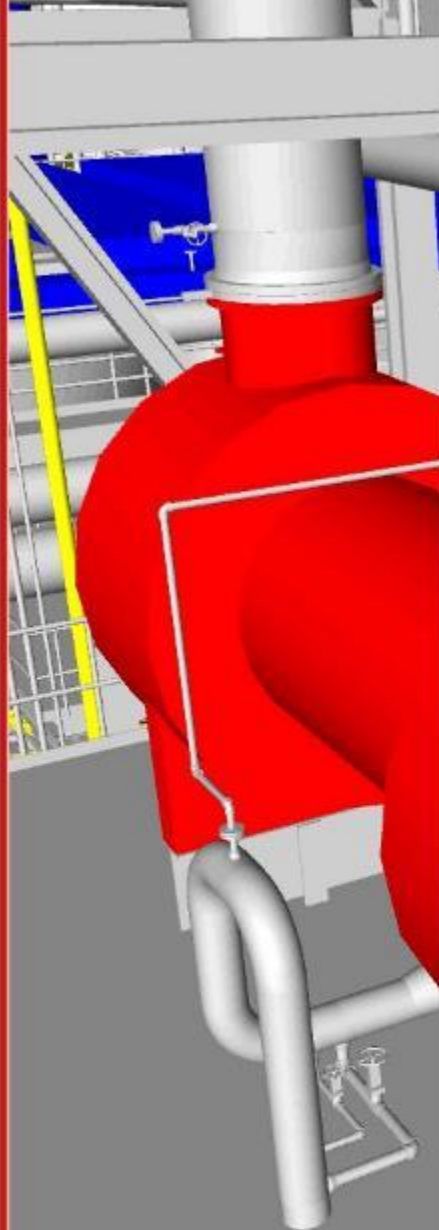


**CEPSA TURNAROUND
METHODOLOGY 4.0**

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



Propiedades

Elemento Unitec Plugin Information TimeLiner WORK PERMITS Material

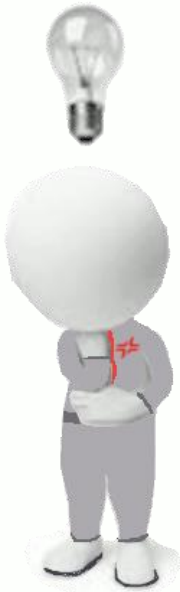
Valor

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1313952 PPL3-20-/C-5412 - PLACEMENT DDCC M TMS AUTHORIZER 1 03:45-04:15

1313991 PPL3-20-/C-5412 - MECHANICAL WORK M TMS AUTHORIZER 1 03:45-04:15

COMPATIBILITY CHECK



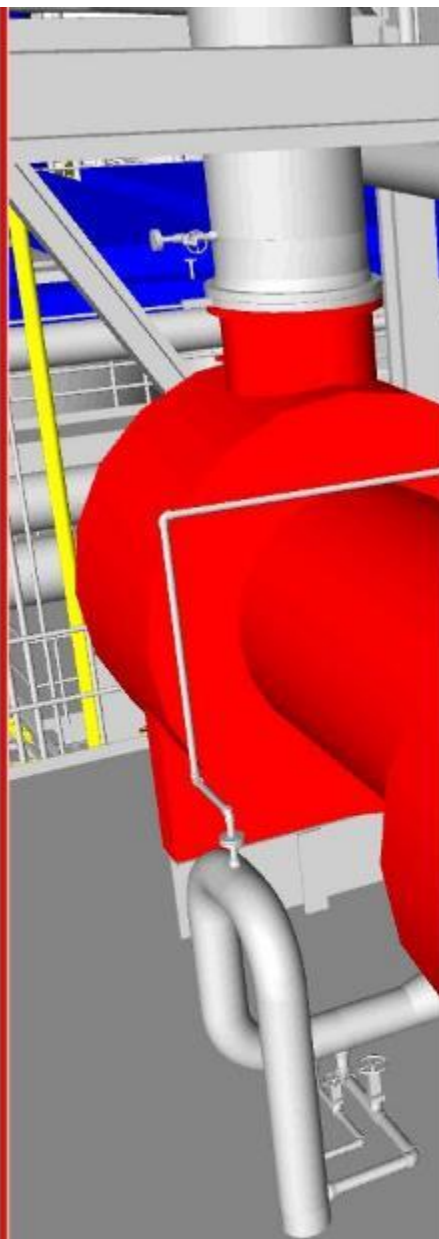


**CEPSA TURNAROUND
METHODOLOGY 4.0**

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



Propiedades

Elemento Unitec Plugin Information TimeLiner WORK PERMITS Material

Valor

1314028 PPL3-20-/C-5412 - INSPECTION WORK M OCA AUTHORIZER 1 03:45-04:15

~~1313953 PPL3-20-/C-5412 - PLACEMENT DDCC M TMS AUTHORIZER 1 03:45-04:15~~

1313991 PPL3-20-/C-5412 - MECHANICAL WORK M TMS AUTHORIZER 1 03:45-04:15



COMPATIBILITY CHECK

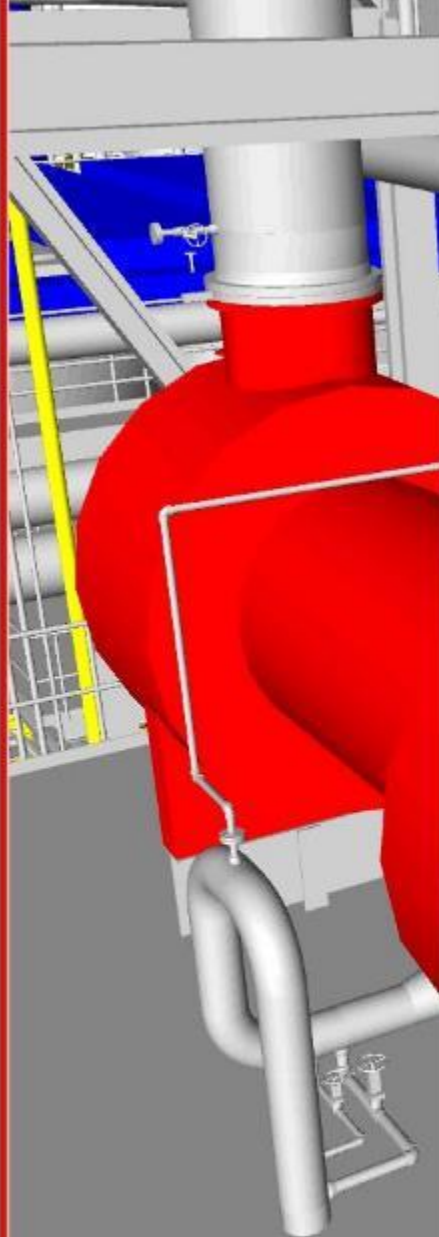


**CEPSA TURNAROUND
METHODOLOGY 4.0**

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



Propiedades

Elemento Unitec Plugin Information TimeLiner WORK PERMITS Material

Valor

1314028 PPL3-20-/C-5412 - INSPECTION WORK M OCA AUTHORIZER 1 03:45-04:15	✓
1313952 PPL3-20-/C-5412 - PLACEMENT DDCG M TMS AUTHORIZER 1 03:45-04:15	
1313991 PPL3-20-/C-5412 - MECHANICAL WORK M TMS AUTHORIZER 1 03:45-04:15	✓

COMPATIBILITY CHECK



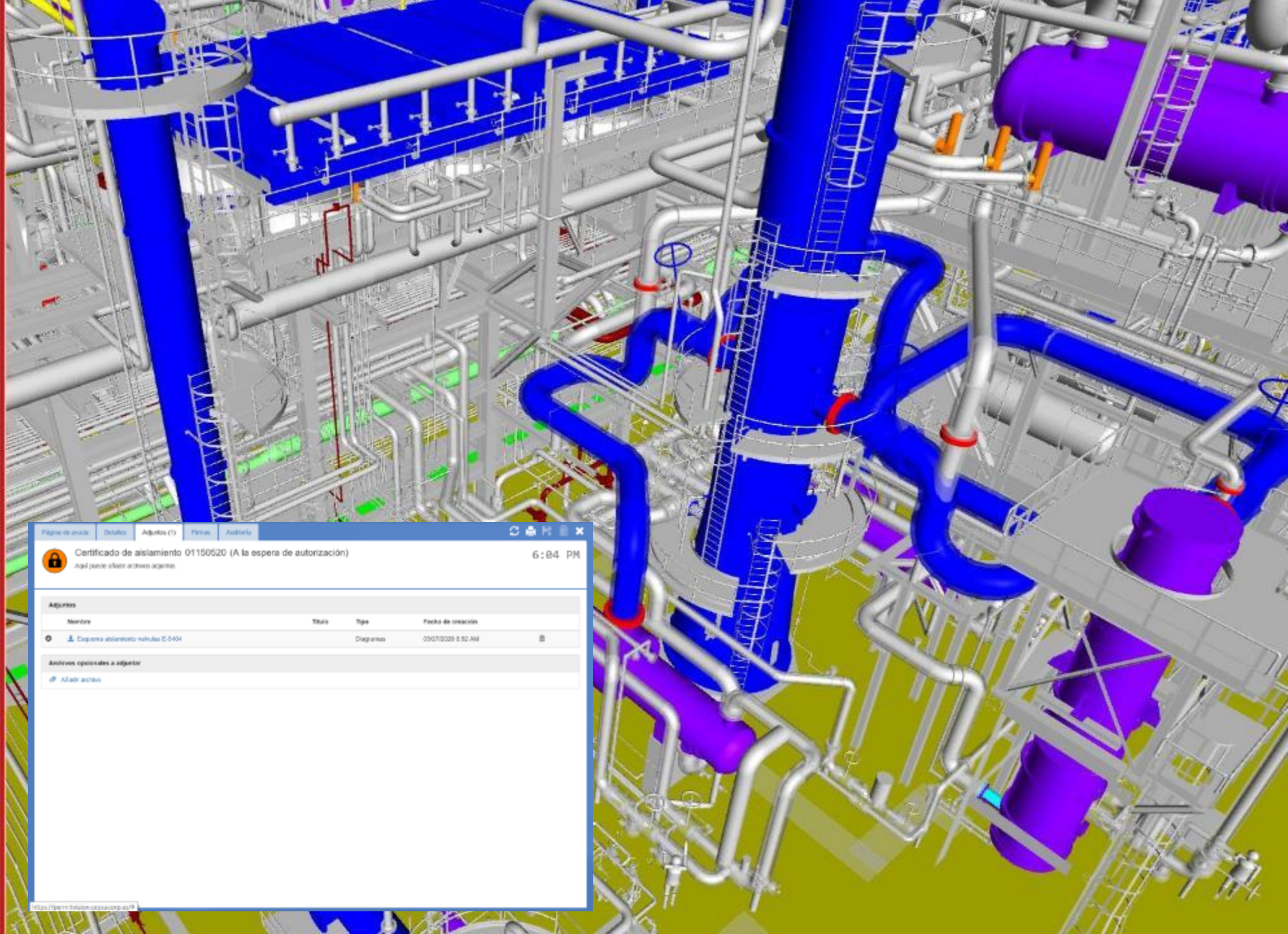


CEPSA TURNAROUND
METHODOLOGY 4.0

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



Página de estado Detalles Adjuntos (1) Firmas Auditoría 6:04 PM

Certificado de aislamiento 01150520 (A la espera de autorización)
Aquí puede añadir archivos adjuntos.

Adjuntos				
Nombre	Título	Tipo	Fecha de creación	
Documento aislamiento rutinas C-5404		Diagramas	03/07/2020 11:52 AM	

Archivos opcionales a adjuntar

Añadir archivos



CEPSA TURNAROUND
METHODOLOGY 4.0

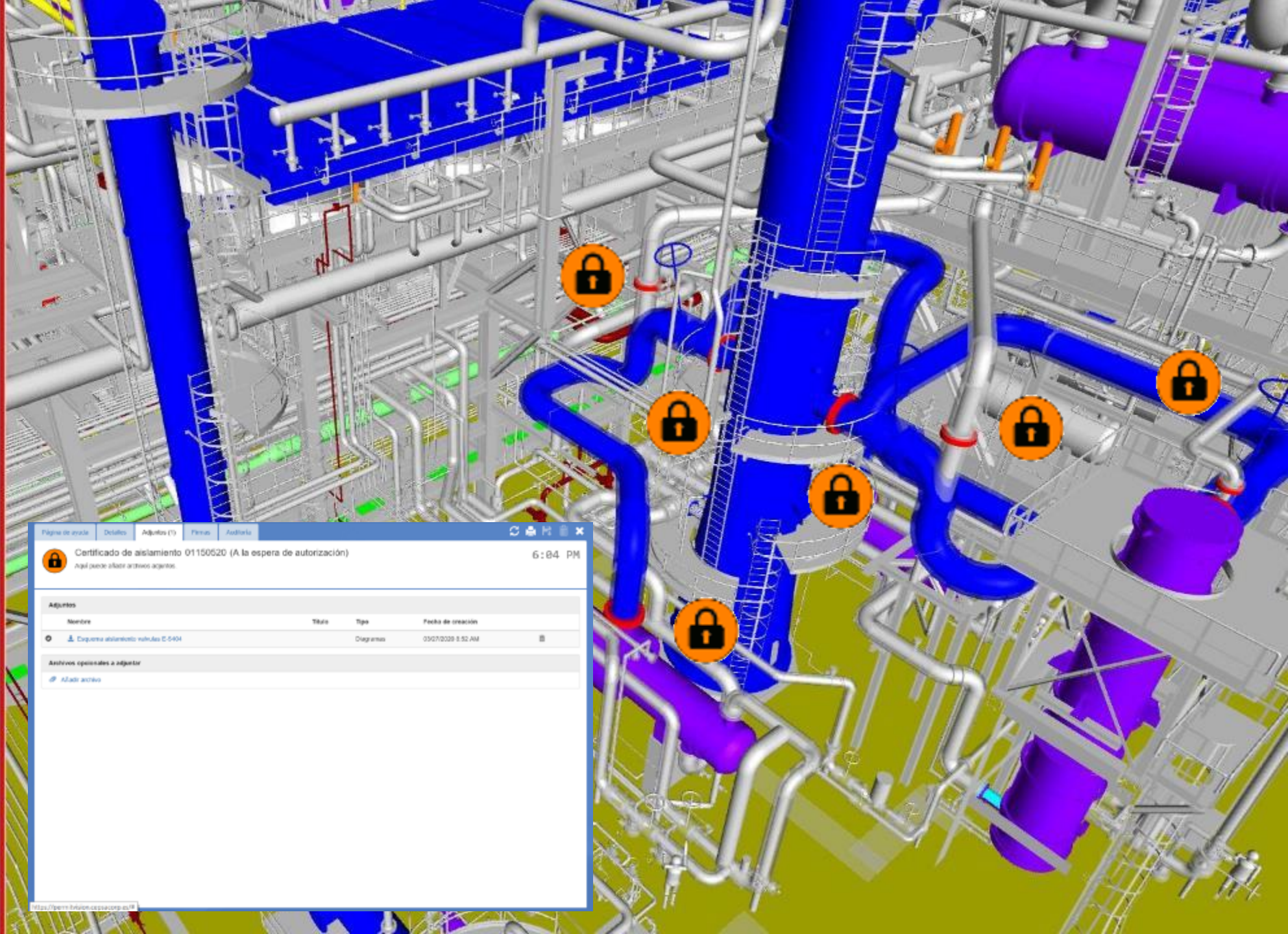
3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



14-17 Nov 2020
ERTC VIRTUAL
2020



Página de acceso Detalles Adjuntos (1) Firmas Auditoría 6:04 PM

Certificado de aislamiento 01150520 (A la espera de autorización)
Aquí puede añadir archivos adjuntos.

Adjuntos				
	Nombre	Título	Tipo	Fecha de creación
	Expediente aislamiento rutinas C-5404		Diagramas	03/07/2020 11:52 AM

Archivos opcionales a adjuntar

Añadir archivos



CEPSA TURNAROUND
METHODOLOGY 4.0

3D MODELS INDUSTRIAL PLANTS

NEW INDUSTRIAL PLANTS

3D MODELS
PREVIOUS WORKS



☰ Permiso de trabajo

Número:

Título:

Descripción del trabajo:

Se puede copiar:

Avísos:

Fecha:

Parada:

Num. Proyecto:

Trabajo de primera hora:

Fábrica / instalaciones:

Estado:

Firmado por:

Tipología de elemento:

Orden de Trabajo:

Disciplina:

Es audiado:

Rango de fechas:

Tipo:

Equipo / Ubicación:

Borrado:

Certificado de aislamiento:

Trabajo completo / incompleto:

Localización de trabajo:

Compartir:

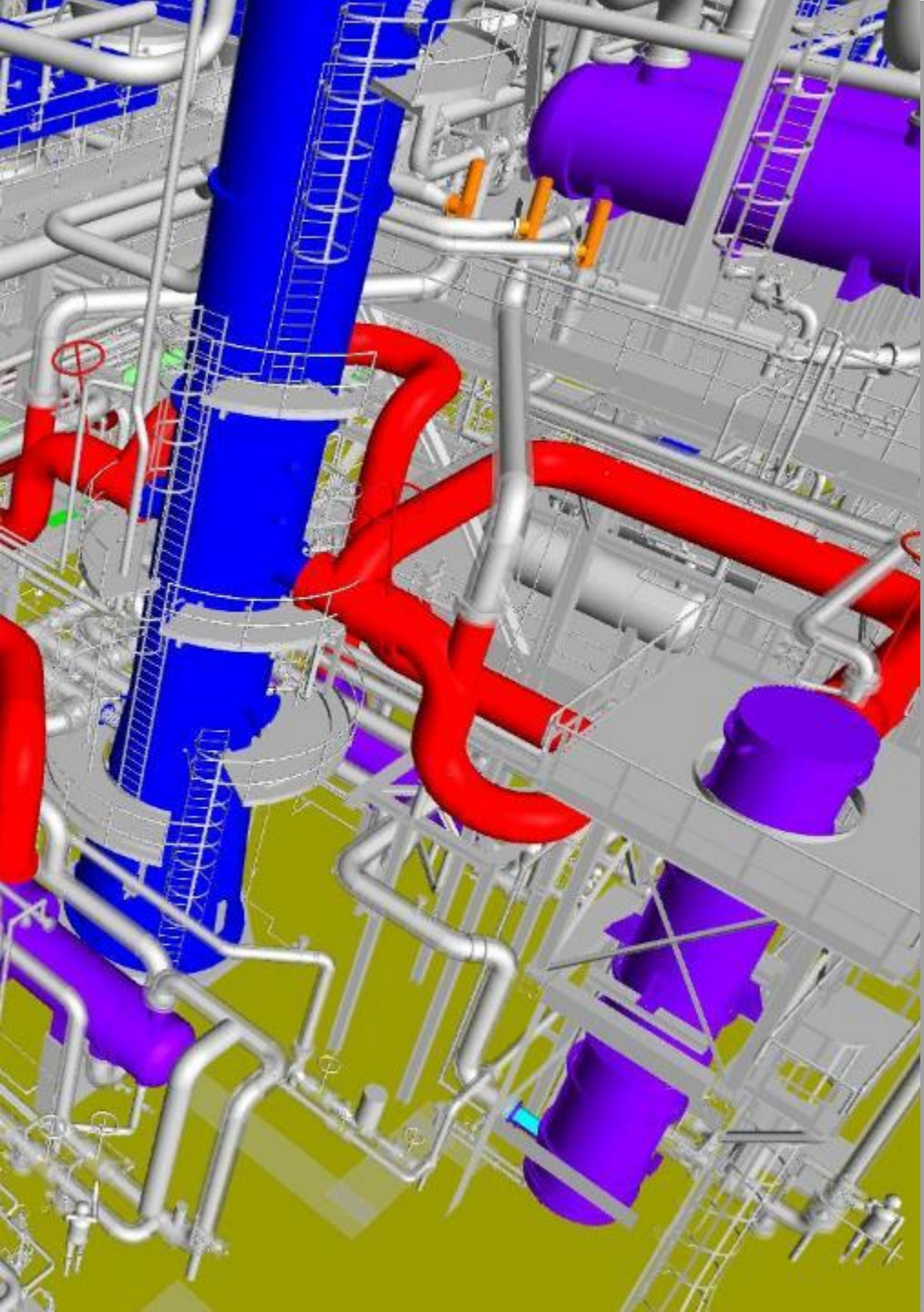
Departamento responsable:

▼ (No se ha seleccionado filtro) ✕ Limpiar búsqueda ➦ Exportar 🔍 Buscar

Conecte según el campo por el cual quiere agrupar

	Número	Tipo	Estado	Título	Días que f.	Inicio plan.	Fin plan.	Certificado	Avísos	Req. Pie	Firmado por	Localizac.	Fábrica / U.	Equipo / U.	Descripción del trabajo	No
■	01314054	Trabajo en...	A la espera...	14/10/2020	19 Oct 2020	19 Nov 2020	Si	No	No	No	No	FRACCIO...	CEPSA Q...	C-5412 C...	IC-5412 Rotura 110X31 M	
■	01314020	Trabajo en...	A la espera...	PPL3 20 / ...	19 Oct 2020	19 Nov 2020	No	No	No	No	No	FRACCIO...	CEPSA Q...	C-5412 C...	IC-5412 Trabajos de inspección M	
■	01313991	Trabajo en...	A la espera...	PPL3 20 / ...	19 Oct 2020	19 Nov 2020	Si	No	No	No	No	FRACCIO...	CEPSA Q...	C-5412 C...	IC-5412 Desmontar accesorios Extensor haz nuclear...	
■	01313952	Trabajo en...	A la espera...	PPL3 20 / ...	19 Oct 2020	19 Nov 2020	Si	No	No	Si	Si	FRACCIO...	CEPSA Q...	C-5412 C...	IC-5412 Colocar DOOC aperturados para vaporizado...	

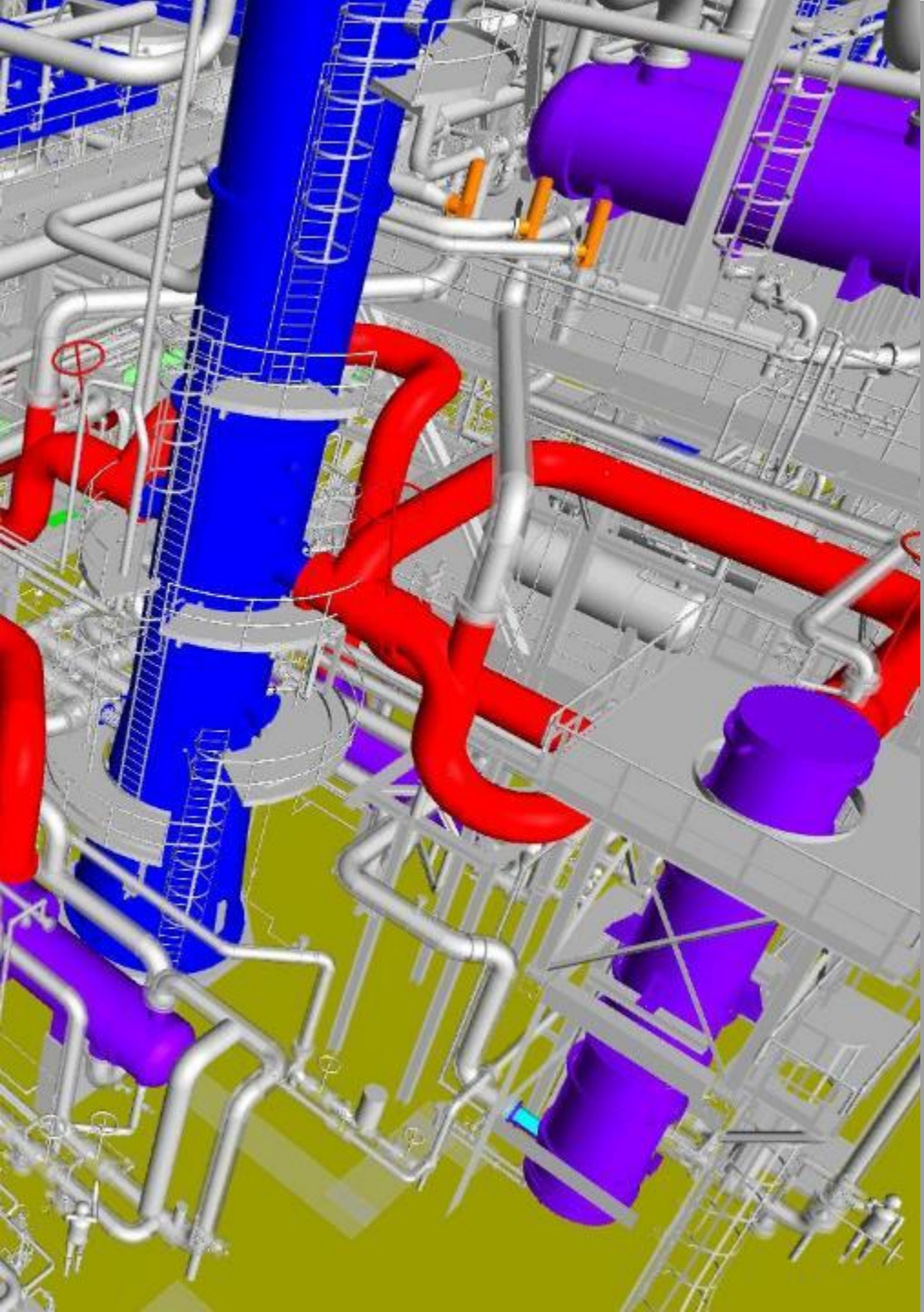
4 registros.



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1321550 PPL3-20-54FR-1500 - LINE DRYING M FAYSOL AUTHORIZER 1
1322003 PPL3-20-54FR-1500 - PLACEMENT DDCC M FAYSOL AUTHORIZER 1
1331933 PPL3-20-54FR-1500 - MECHANICAL WORK (ASSEMBLY AND WELDING) M FAYSOL AUTHORIZER 1
1332026 PPL3-20-54FR-1500 - REMOVAL OF SHIELDS M FAYSOL AUTHORIZER 1
1332527 PPL3-20-54FR-1500 - REMOVAL DDCC M FAYSOL AUTHORIZER 1
1332548 PPL3-20-54FR-1500 - HYDRAULIC TESTING M FAYSOL AUTHORIZER 1

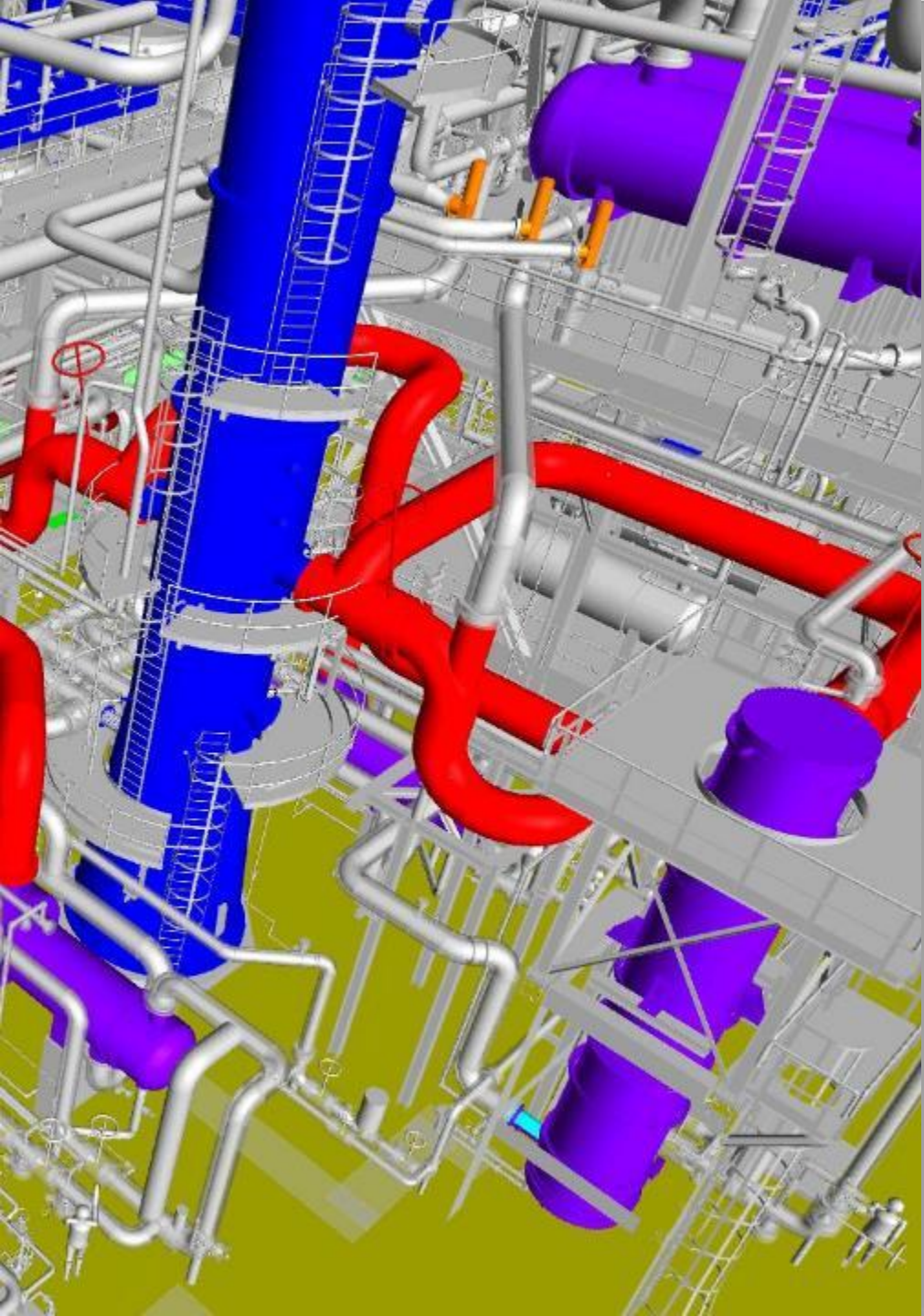
PERMIT NO.



Valor

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DESCRIPTION



Propiedades

Elemento TimeLiner WORK PERMITS SmartPlant 3D

Valor

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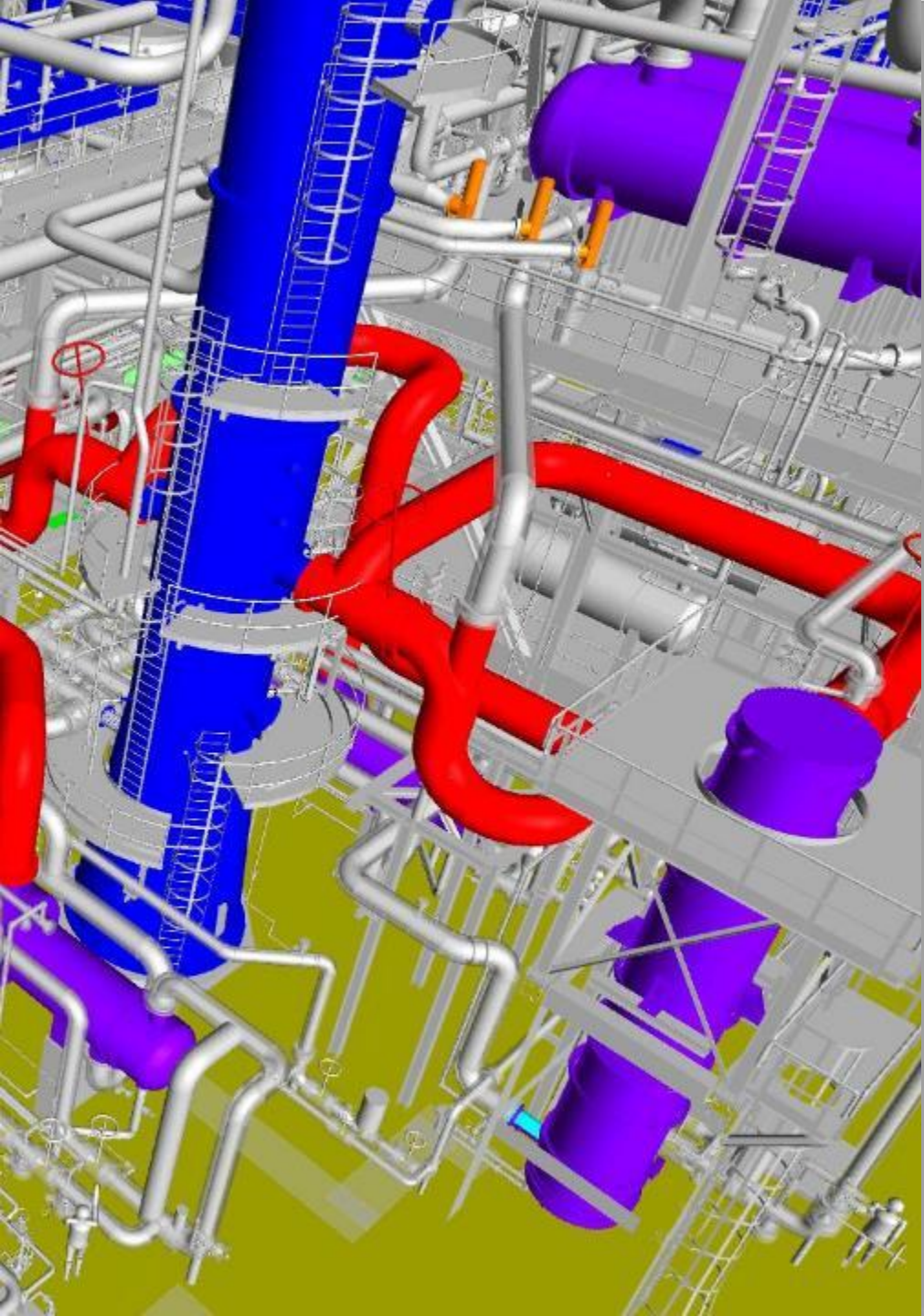
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1332548 PPL3-20-54FR-1500 - HYDRAULIC TESTING M FAYSOL AUTHORIZER 1

TURN



Propiedades

ElementoTimeLinerWORK PERMITSSmartPlant 3D

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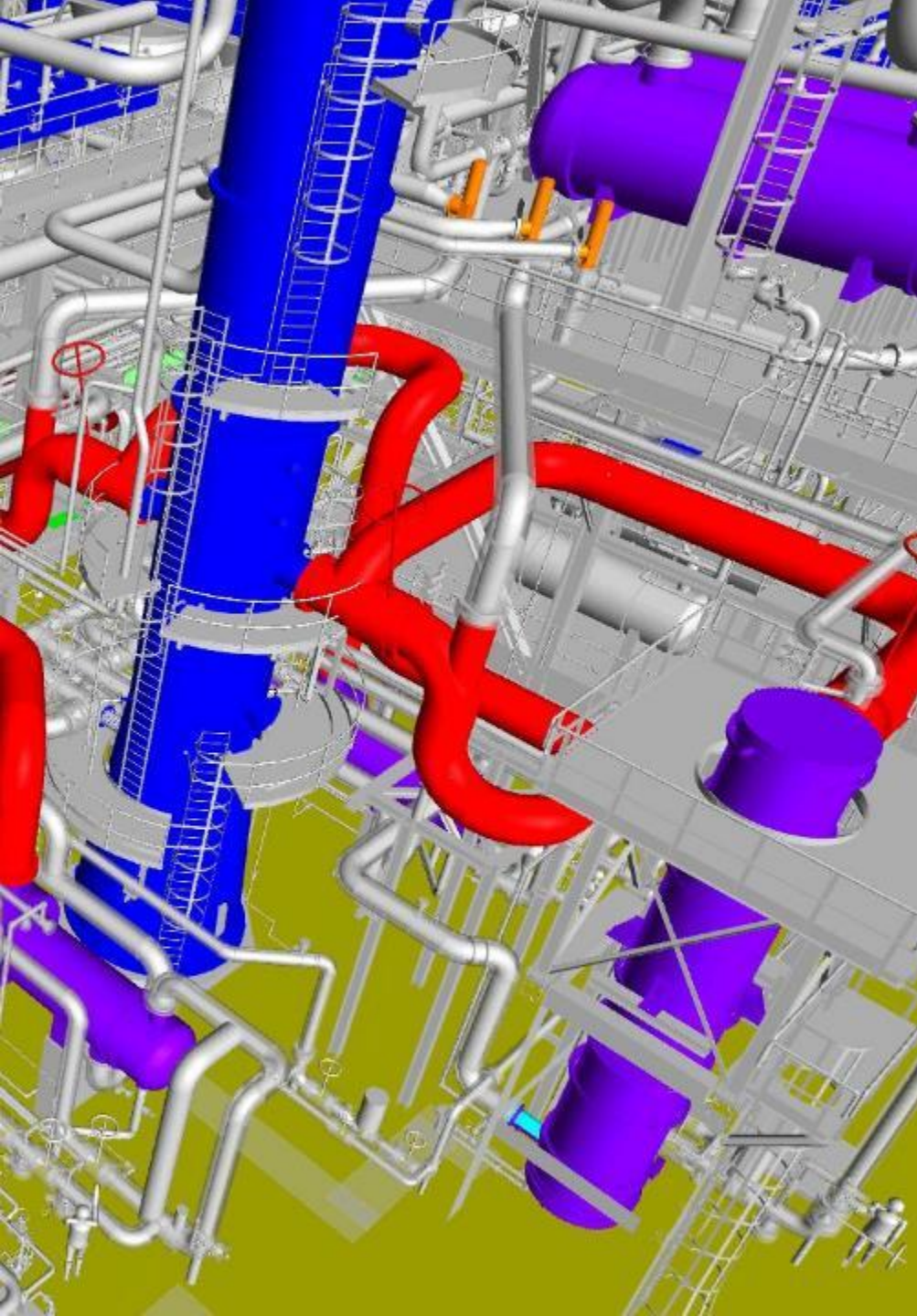
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COMPANY



Propiedades

Elemento | TimeLiner | WORK PERMITS | SmartPlant 3D

Valor

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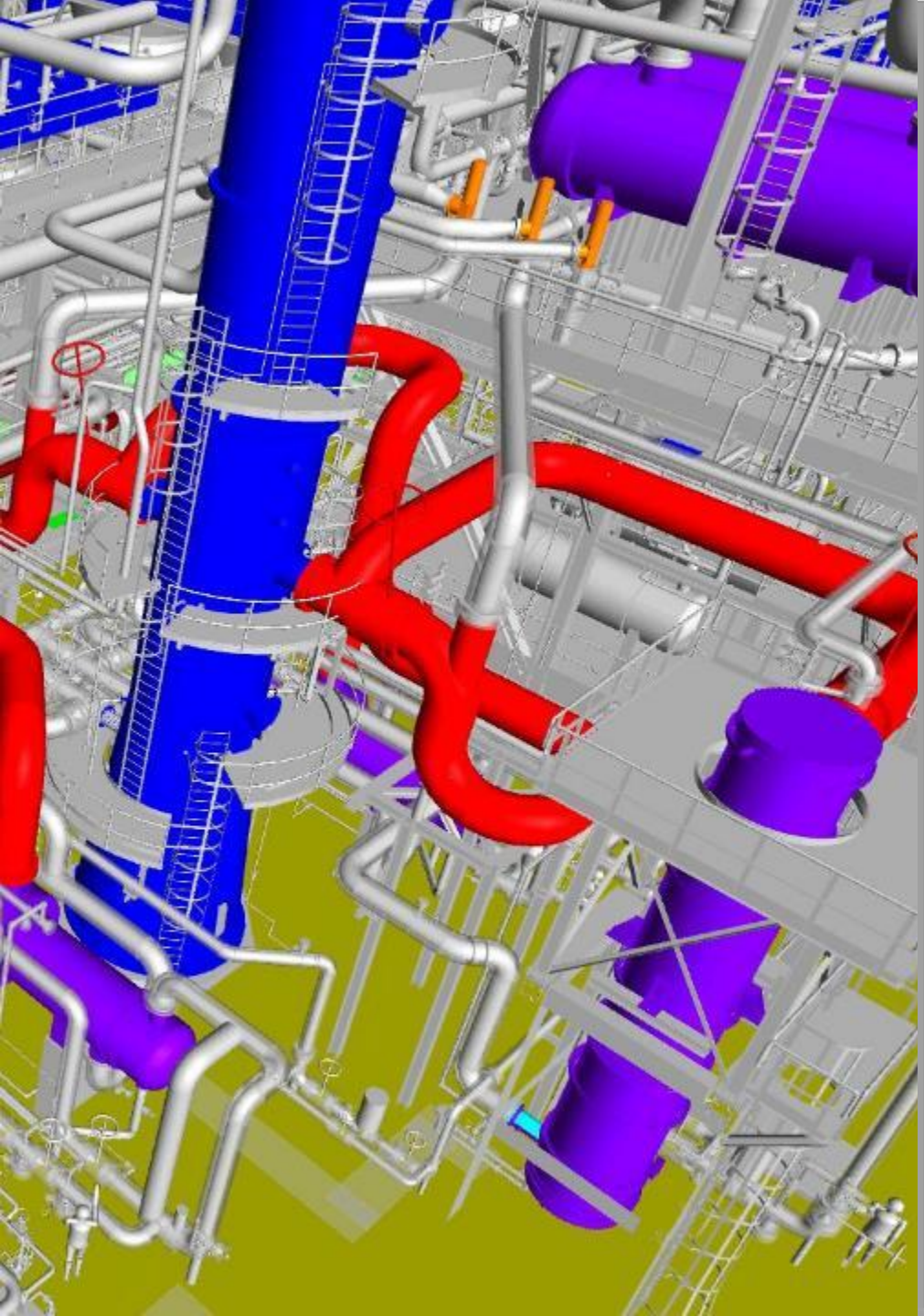
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AUTHORIZER



Propiedades

Elemento | TimeLiner | WORK PERMITS | SmartPlant 3D

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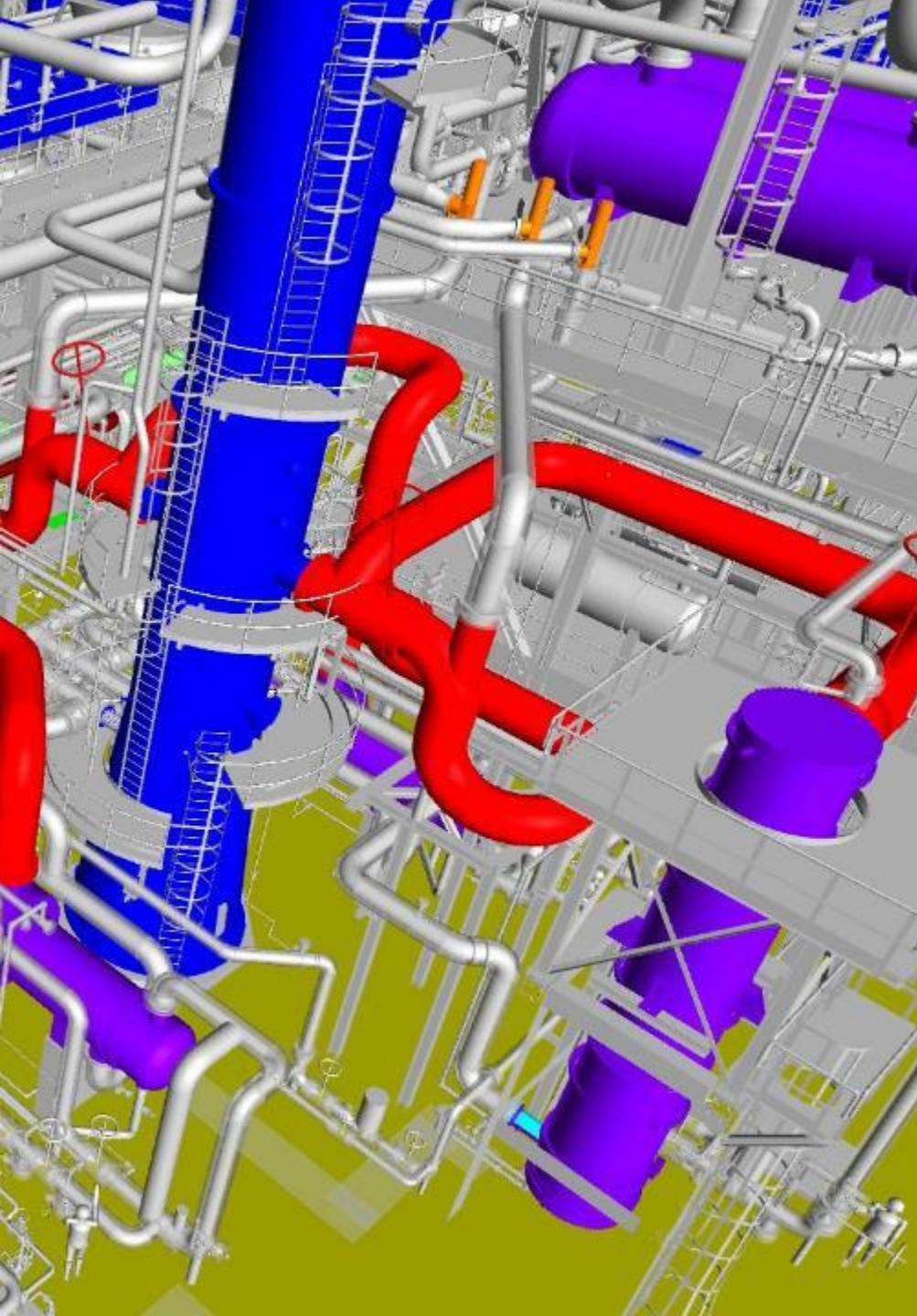
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COMPATIBILITY CHECK





Propiedades

Elemento | TimeLiner | WORK PERMITS | SmartPlant 3D

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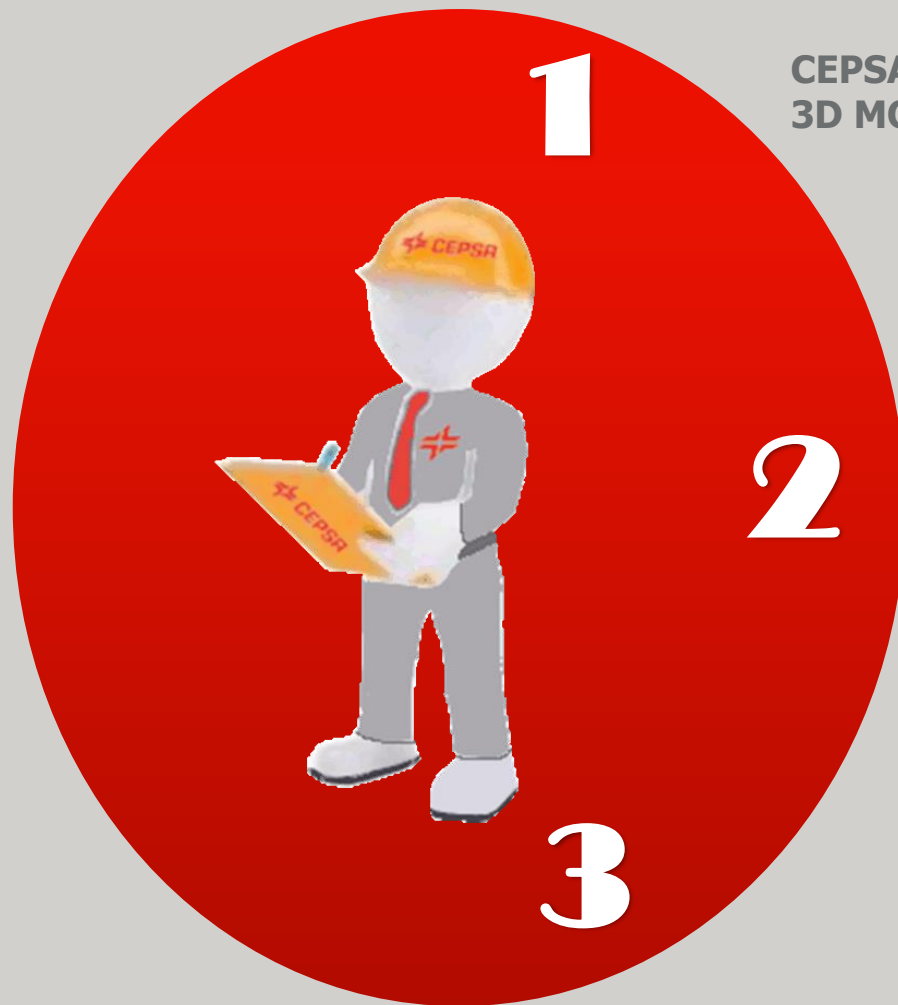


COMPATIBILITY CHECK



FOCUS POINTS.

SUMMARY.

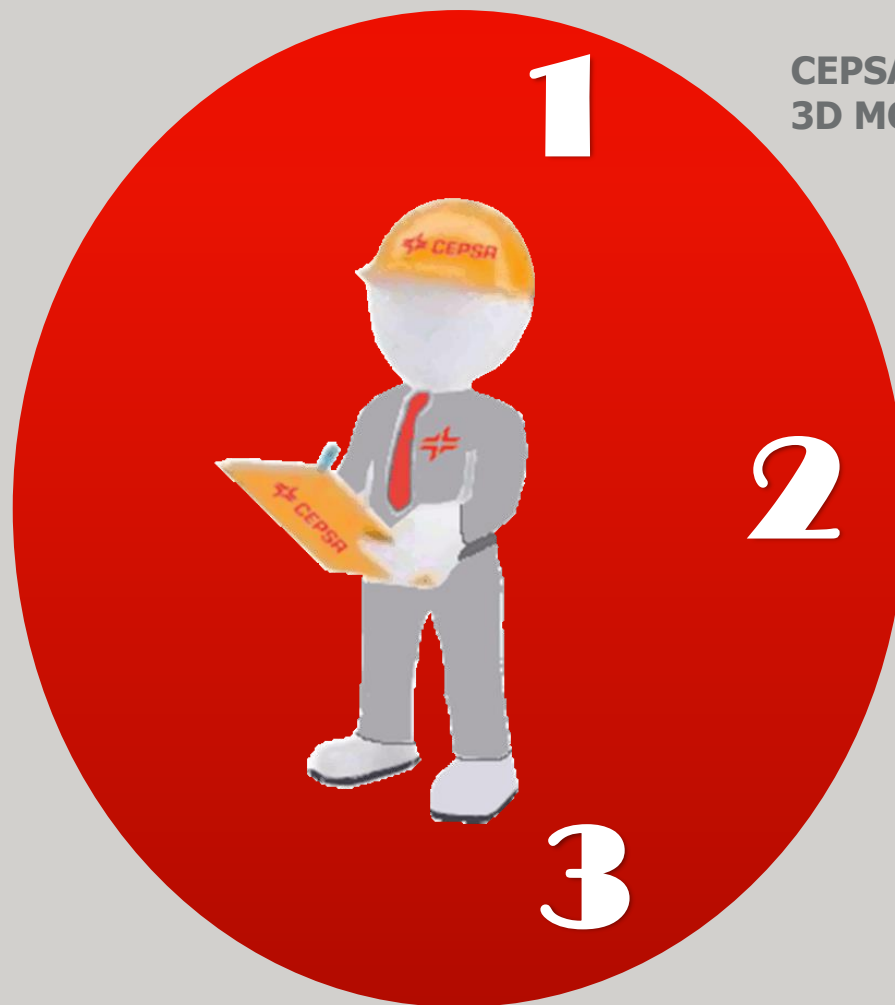


**CEPSA TURNAROUND METHODOLOGY 4.0 TO JOIN
3D MODEL -SCHEDULING- PERMIT OF WORK TOGETHER.**



FOCUS POINTS.

SUMMARY.



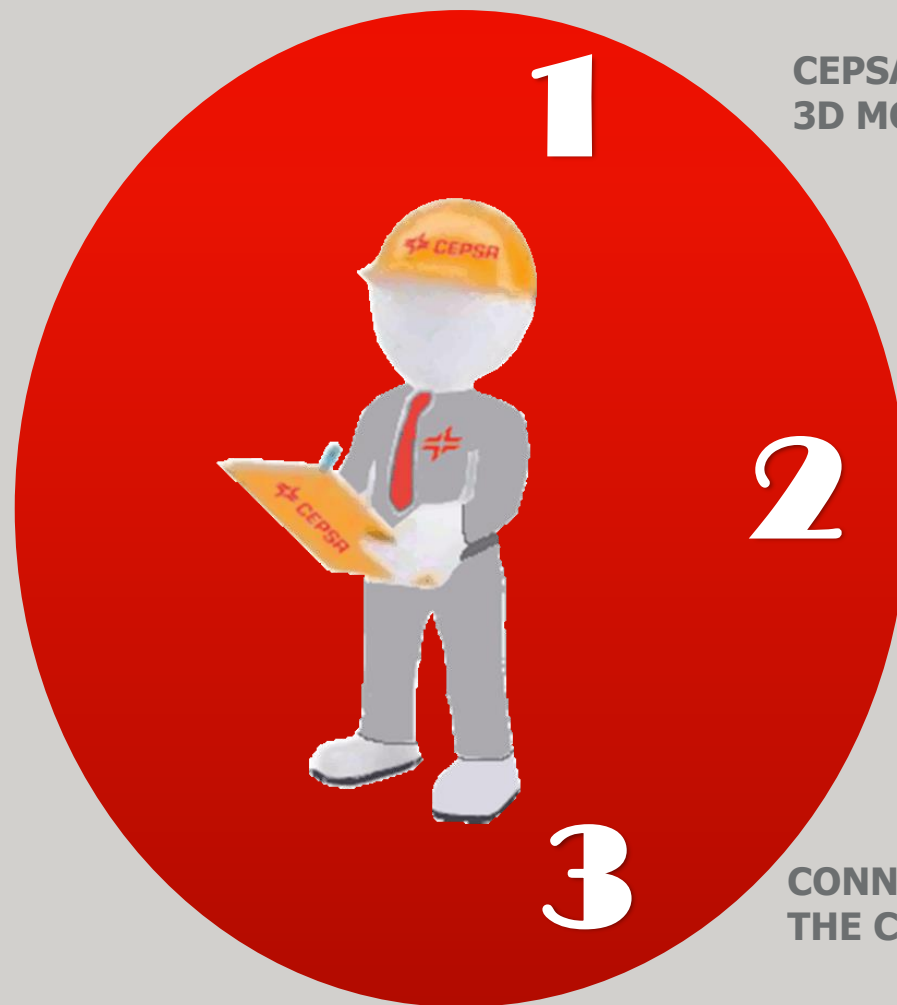
**CEPSA TURNAROUND METHODOLOGY 4.0 TO JOIN
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**INTERFERENCE MANAGEMENT HELPS
TURNAROUND TEAMS.**



FOCUS POINTS.

SUMMARY.



**CEPSA TURNAROUND METHODOLOGY 4.0 TO JOIN
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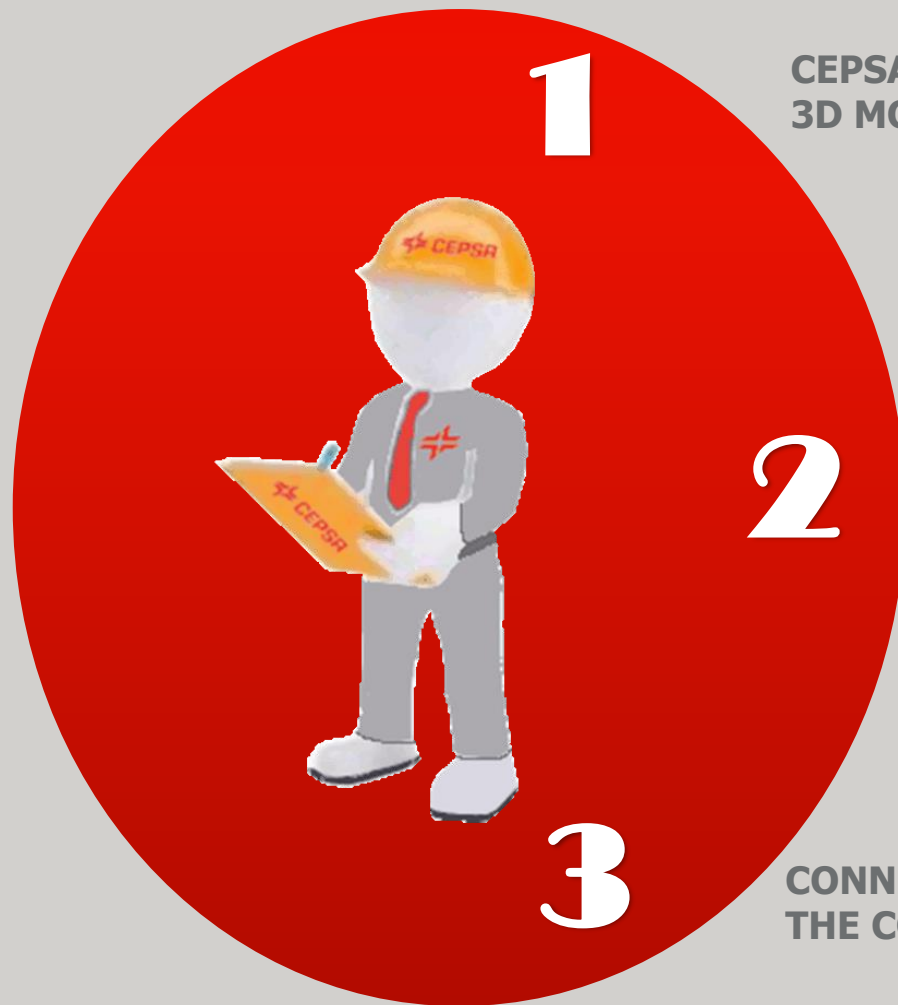
**INTERFERENCE MANAGEMENT HELPS
TURNAROUND TEAMS.**

**CONNECTS THE DIGITAL PERMIT SYSTEM TO MAKE
THE CONTROL AND CHECKING.**



FOCUS POINTS.

SUMMARY.



**CEPSA TURNAROUND METHODOLOGY 4.0 TO JOIN
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**INTERFERENCE MANAGEMENT HELPS
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