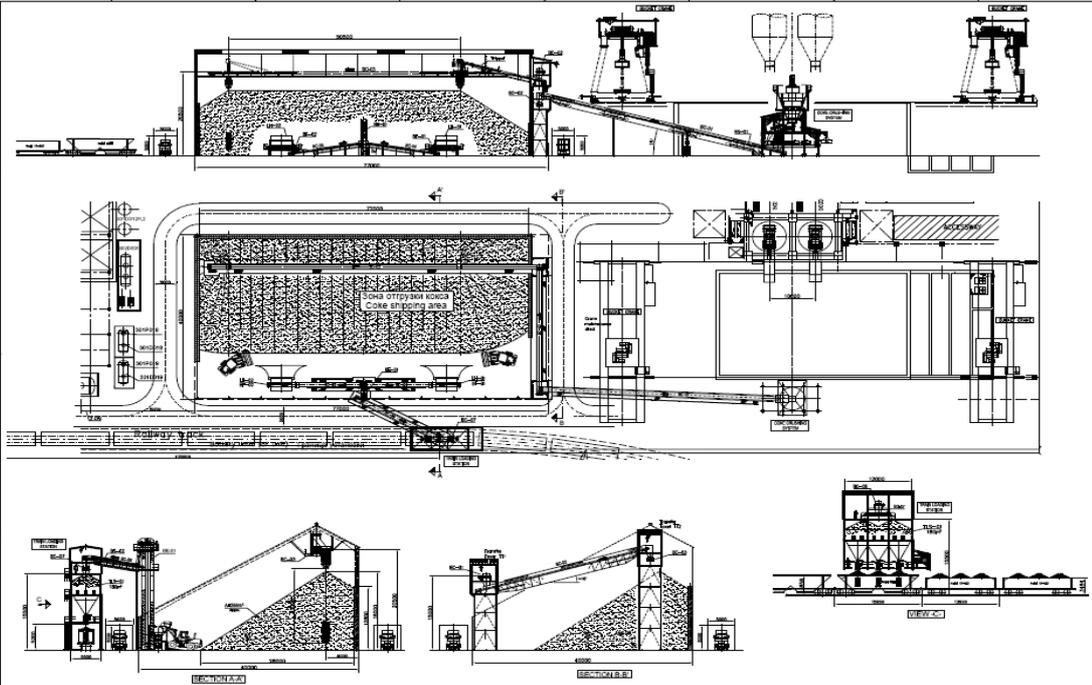


# CASE

# STUDY

CJSC Antipinsky Oil Refinery  
(Russia)



In the first half of 2015, CJSC Antipinsky Oil Refinery awarded one contract to TaimWeser, to undertake a new coke conveyor belt, in Antipinsky (Russia).

- The project consists of the transfer of coke from the discharge pits of the chambers, where the product is produced, to the hopper that feeds the circuit conveyor belt, where Taim Werser has supplied a transport system based on a specific design conveyor belts and associated electrical equipment, peripherals and control system, in order to obtain the best and safest transport system.

- This equipment is designed to work in very aggressive and explosive environments, abrasive dust and adverse weather, so the equipment is protected from heat, corrosion and dust, and require protection for explosive atmospheres, according to the customer's requirements. The scope of supply is the following: engineering, design, manufacturing y documentation of the following equipment:

- Draw-out MCC, for the fixed and variable motors, 4b form, according to IEC 439-1. Intelligent relays, connected via field bus for each one of the direct starters.
- Panels for the heating resistances and auxiliaries.
- Hardware & software of the control unit, based on redundant and safety PLC, S7-400 family (Siemens brand).
- Remote unit for the acquisition of I/Os, inside explosion-proof panel, inox. ATEX 2GD Exd IIB IP66 T4/T135C.
- Control and operation panel.
- HMI, WinCC family (Siemens brand).
- Engineering station including development software.
- Development licenses of software for the PLC and HMI.
- E-room, including the control equipment and operation area containing also de main desk. The E-room will be a metallic container, hermetically sealed, to be installed in ATEX area, at the loading point. Total dimensions: 8.000 mm x 2.438 mm x 2.591 mm (width x height x depth).
- Detailed electrical diagrams and installation basic engineering including the rest of associated documentation.
- Factory acceptance test at our premises in Bilbao (Spain) .(F.A.T.).
- Installation supervision, commissioning and training on-site (Antipinsky Oil Refinery -Russia).

## Coke Handling

# Control Diagram

**Ingeteam**

4/11/2016 10:40:47 AM

User OPERATOR\_01

**COKE HANDLING SYSTEM**

**By-Pass**

MCC 1 MCC 2

MAN MAN

**Circuit 2 - Wagons Loading**

Emergency Local Remote

Manual Start Auto Start

Auto Start\_Seq>Loading Vendors

**Circuit 1 - Stacking**

Emergency Local Remote

Tripper to Init Pos Automatic Starting Seq.

Tripper Automatic Work Automatic Stopping Seq.

**Lubrication**

Coke Crusher STOP READY

Automatic Starting Seq. Automatic Stopping Seq.

**Material In Line**

Storage Area 0.00 T/h 0.00 %

Hoppers 0.00 T/h 0.00 %

Train Wagon 0.00 T/h 0.00 %

11/04/16 09:54:06 11-CPU\_LED\_ST\_00 EXT (external error) CPU Slave Led CPU Status  
 11-CHS\_0EN 11/04/16 09:54:06 11-CPU\_LED\_ST\_00 INT (internal error) CPU Slave Led CPU Status

ACK

MAIN PLANT VIEW

**SEQUENCE C1**

START

READY

STOP

**SEQUENCE C2**

START

READY

STOP

**SEQUENCE C3**

START

READY

STOP

**LOAD WAGON**

CONVOY SELECTION

WAGON IN LOAD POSITION

WAGON LOAD

**LOAD BUFFER HOPPER**

BC-07 AUTO STARTING

WAGON LOAD

LOAD NEXT WAGON

**TRIPPER CAR AREA**

TRIPPER-AUTO WORK

TRIPPER TO INIT POS

INITIAL POINT 95 m

FINAL POINT 100 m

**STACKING AREA**

AUTO STARTING

AUTO STOPPING

**VIBRATING FEEDER**

FEED RATE 140.0 T/h

**EXTRACTING FEEDER**

FEED RATE 175.0 T/h

Zone Language