



COMPANY PRESENTATION



LARELEC

English Version V18

Creation of LARELEC company

Larelec was initially a Unipersonal Simplified Share Company founded in 2008 by Philippe LAREDO, Chief Executive Officer. In early 2019, Larelec became a Simplified Share Company thanks to the employees who participated in the restructuring of the company. Larelec is based in Gémenos (France)

Company is specialized in the electrical & automation industrial field

Larelec company it is an integrator in electrical and automation works; we are performing the detailed engineering from HT equipment's till sensors, including all the necessary phases for realization of complete cement factory renovation or new cement factory,

Engineering



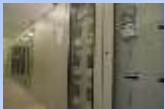
- Audit
- Preliminary engineering
- Detailed engineering

Automation



- Engineering
- Functional Analysis
- Programming

Supplies



- HT, MT, Transformers
- LV Electrical panels
- Equipment's BT
- Instrumentation

Installation



- Installation
- Commissioning

Services



- Technical assistance
- Specialists provision

Maintenance



- Corrective
- Preventive
- Programmed
- Online technical support

Training



- Electrical
- Automation
- Instrumentation
- Maintenance


Spare Parts





- Team dedicated to spare parts
- Network
- Expertise

LARELEC France

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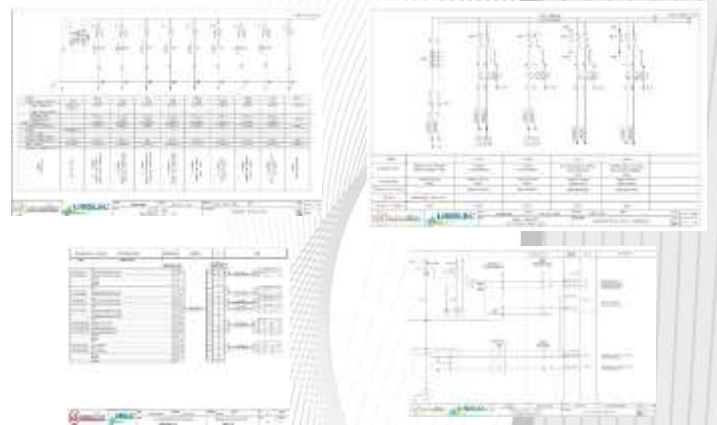
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 Web www.larelec.com

Engineering

- ✓ Audits
- ✓ Preliminary engineering
- ✓ Detailed engineering
- ✓ Expertise, analyze, optimization
- ✓ Selectivity study
- ✓ Typical electrical drawings
- ✓ Single line diagram
- ✓ Consumers list
- ✓ Sensors list
- ✓ Installation engineering
- ✓ Equipment's implantation
- ✓ Cable tray routing engineering
- ✓ ...



Equipements supplies

- ✓ High voltage equipment's
- ✓ Medium voltage equipments
- ✓ HT /MT Transformers
- ✓ Motors
- ✓ MT/BT Capacitor bank
- ✓ MCC panels
- ✓ Low voltage distribution panels
- ✓ UPS and Battery Charger
- ✓ Variable speed drives panels
- ✓ Soft starter panels
- ✓ Lighting panels
- ✓ Power cables
- ✓ Control cables
- ✓ Earthing and Lightning system
- ✓ Fire alarm system
- ✓ Telephone system
- ✓ Intercommunication system
- ✓ VCS, Junction box
- ✓ Power socket
- ✓ ...



Automatisation

- Expertise, Audit, Optimization
- Flow sheet
- Standards of programming
- Systems configuration
- Function analysis
- Realization of synoptics
- Programming
- Networks design and implementation of network links
- Programs simulation
- Training



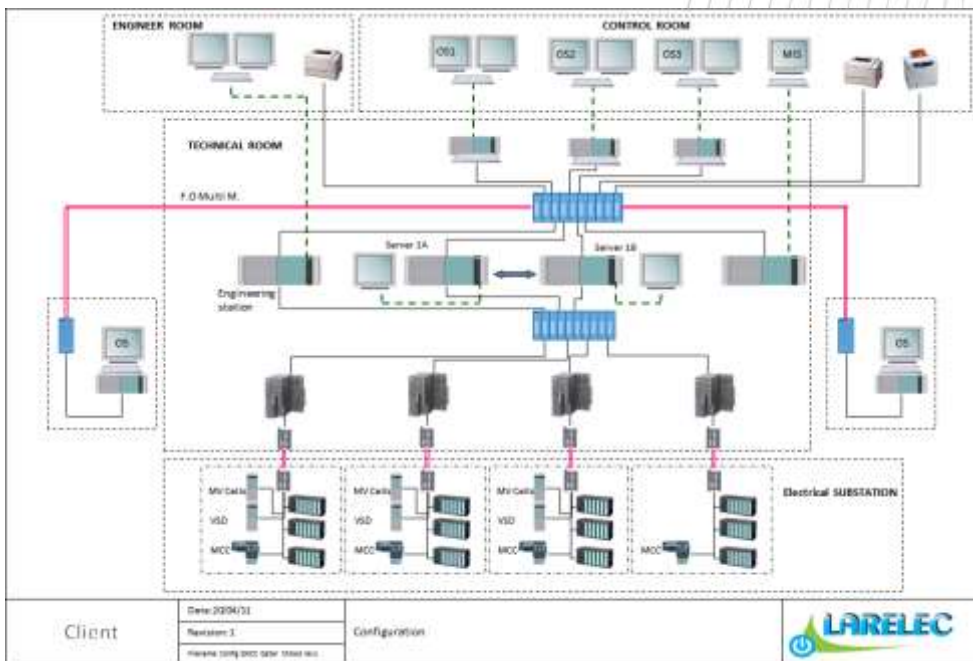
Automation equipment's:

- ✓ SIEMENS, S5, S7 et CEMAT
- ✓ MODICON et SCHNEIDER
- ✓ ABB Automation
- ✓ ALLEN BRADLEY
- ✓ GEFANUC
- ✓ FOXBORO
- ✓ ...

Panels:

- PLC
- Input/Output
- Network

Operator's Control Desk



Instrumentations

- ❑ Process Instrumentation
 - Temperature sensor
 - Pression/Differential Pression
 - Debit
 - Electronic ear
 - ...

- ❑ Instrumentation for equipment's
 - Speed sensors/Speed monitor
 - Drift switches
 - Safety equipment's for conveyors
 - ...

- ❑ Gaz Analyzer cabinet,
- ❑ Dust emission analyzer
- ❑ Cooler / Kiln cameras
- ❑ Kiln scanner
- ❑ TV system
- ❑ ...



Installation & Commissioning

Larelec company hired engineers and technicians with high qualified, with vast experience in industrial fields. This allow us to perform all kind of electrical and automation projects, erection and commissioning with a guarantee of success.

Installation:

- ✓ Manpower with high flexibility
- ✓ Supervisors with high experience
- ✓ Logistics adapted to site
- ✓ Organization in site

Commissioning:

- ✓ Wiring test/Cold test
- ✓ Power test/Hot test
- ✓ Test sequence
- ✓ FAT/Test reception
- ✓ Rapports



SERVICES

- Technical assistance
- Provision of specialists



Spare parts

- Team dedicated
- Studies/Pre-engineering
- Networks supplies
- Our expertise



Training

- Electric
- Automation
- Instrumentation
- Maintenance

Sur demande



Project's management

Our 5 goals:

- ✓ Finish in time
- ✓ Cost control
- ✓ Answer to client's requirements
- ✓ Client satisfaction
- ✓ Teamwork



Maintenance

We carry out the maintenance and troubleshooting of all electrical and automation installations

1- Corrective Maintenance:

All activities performed after equipment failure

- ✓ Reconditioning with or without modification.
- ✓ The control of good functioning.

2- Preventive Maintenance:

Maintenance having the purpose to reduce the probability of equipment's failure or degradation. The activities corresponding to preventive maintenance are triggered according to:

- ✓ A schedule established starting from an important number of equipment's,
- ✓ And / Or by pre-determined criteria significant status of equipment's degradation

3- Programmed Maintenance:

During planned shutdown of factories, Larelec company can provide a maintenance team integrated into the factory team in charge of some activities.

4- Establishing hotline 24h/24:

This contract give access to our maintenance system 24h/24h and to our stock of spare parts.



Our structure

In the interests of competitiveness, Larelec has developed branches in countries with high development potential and secured reliable partners in other countries..



Larelec is based on simple values :

- ✓ Quality
- ✓ Client satisfaction
- ✓ Know-how (experience)
- ✓ Integrity
- ✓ Security
- ✓ Respect
- ✓ Team spirit
- ✓ Responsibility
- ✓ Environment
- ✓ Innovation

Our commitment: security....



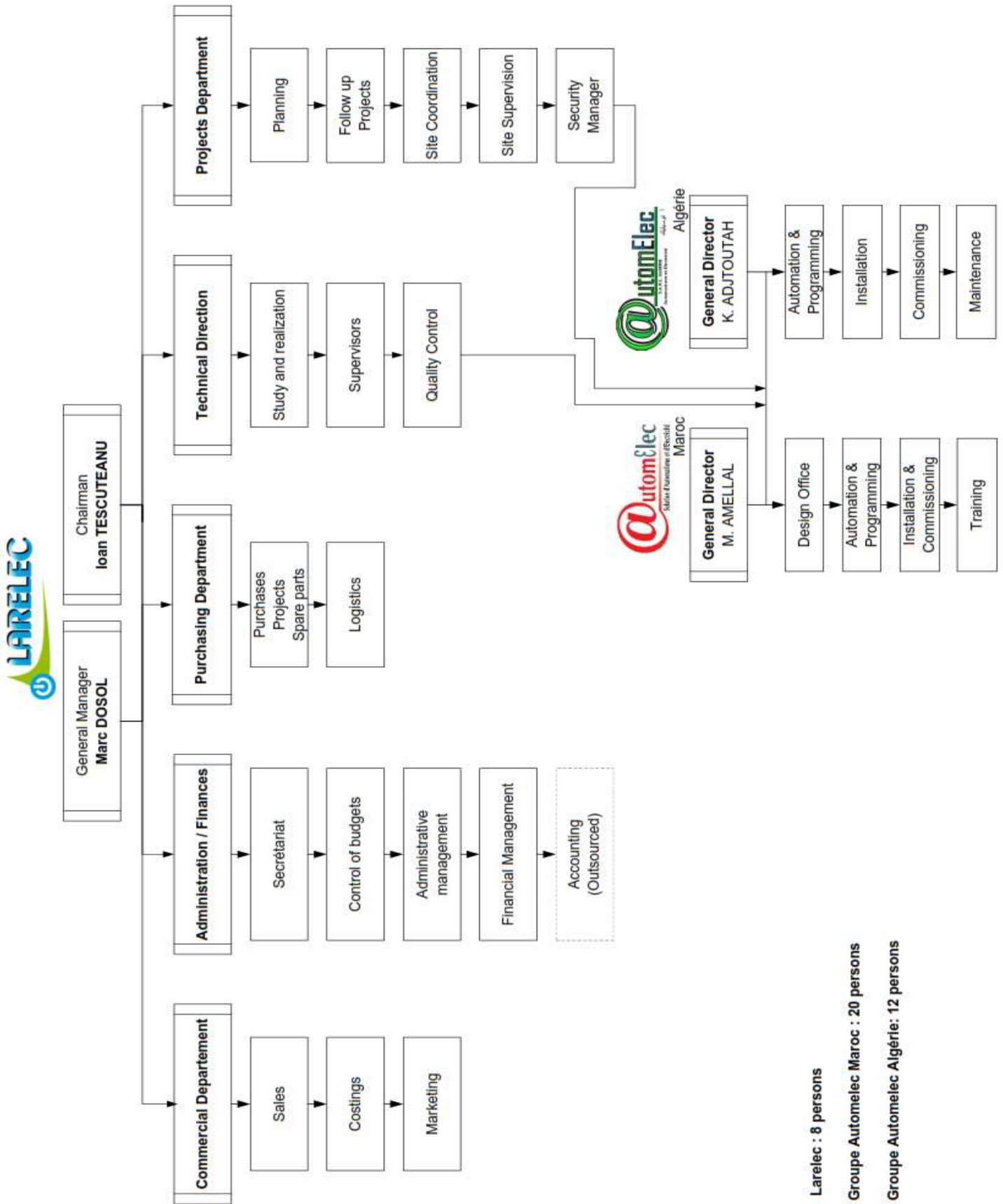
The safety of people and facilities is based on a simple and pragmatic approach::
Information, prevention et responsibilities.



Larelec is a company firmly committed to equitable development, with the permanent desire to reconcile economic logic, respect for the individual and preservation of the environment.



Chart Organization of Larelec Group



Larelec : 8 persons

Groupe Automelec Maroc : 20 persons

Groupe Automelec Algérie: 12 persons

Main References



Reference List : Contracts – 2008 - 2019

CONTRACTS				
N°	CUSTOMER	DESCRIPTION OF THE CONTRACT	COUNTRY	YEARS
1	AAF France	Electric and Automation Revamping of Electrostatic Filter	Algérie	2008
2	IKN	Renovation of Clinker Cooler Hamma Bouziane	Algérie	2008
3	Mangin EGLY	Different projects	Algérie	2009
4	Cement company of Zahana (S.CI.Z)	Different projects	Algérie	2009
5	Cement company of Beni Saf (S.CI.BS)	Different projects	Algérie	2009
6	ASEC Automation	Different projects	Algérie	2009
7	AAF France	Electric and Automation Replacement of Electrostatic Filter	Algérie	2010
8	ASEC Automation	Renovation of Expedition Zahana Cement Factory	Algérie	2010
9	IKN	Different projects	Algérie	2010
10	Cement company of Zahana (S.CI.Z)	Renovation Earthing System	Algérie	2010
11	Cement company of Beni Saf (S.CI.BS)	Supply of low voltage distribution cabinets	Algérie	2011
12	Cement company of Zahana (S.CI.Z)	Renovation of lighting system line 1 and 2	Algérie	2011
13	Cement company of Saida (S.CI.S)	Electric & Automation renovation: limestone stackers, clay stacker, additives stacker	Algérie	2011
14	Cement company of Zahana (S.CI.Z)	Replacement of Control Commande system for Wet Process Production line	Algérie	2011
15	Lafarge Algérie – CIBA	New silo, Transport cement : Panels supply, Electricity, instrumentation, automation, supervision	Algérie	2011
16	Cement company of Zahana (S.CI.Z)	Replacement of Control Commande system for Dry Process Production line	Algérie	2012
17	Cement company of Hamma Bouziane (S.CI.HB)	Renovation of control system for limestone crusher	Algérie	2012
18	Cement company of Hamma Bouziane (S.CI.HB)	MCC cabinets Raw Mill 2	Algérie	2012
19	FCB	Electrical & Automation extension production lines	Russie/Moldovie	2012
20	ASEC / Ciment calcia	Supply of low voltage cabinets	France	2012
21	Cement company of Hamma Bouziane (S.CI.HB)	Electric and automatism revamping of packing & expedition workshop	Algérie	2013
22	CERALG/LAFARGE Holcim Algeria	Electric & Automation Revamping of Jenjen Cement Terminal	Algérie	2013
23	CERALG/LAFARGE Holcim Algeria	Electric & Automation Revamping of Arzew Cement Terminal	Algérie	2013
24	Cement company of Sour El Ghozlane (S.C.SEG)	Electric & Automation Revamping of packing & expedition workshop	Algérie	2013
25	Cement company of Ain El Kebira (S.C.AEK)	Electric & Automation Revamping: Crusher, Kiln, Packing, water station, workshop A and reclaimers Marne	Algérie	2014
26	Cement company of Saida (S.CI.S)	Automation Revamping of control command system production line	Algérie	2014
27	Cement company of Saida (S.CI.S)	Electric & Automation Revamping of control commande system Cement and Raw Material workshops	Algérie	2014
28	IBAU Hambourg	Electric & Automation Revamping of expedition workshop	Algérie	2015
29	LAFARGE Ciment d'Oggaz (LCO)	Supply, installation and commissioning - cabinet BT - compressor 315 KW	Algérie	2015
30	LAFARGE Béton Algérie	Supply of Larelec Safety System for silos feeding and extraction	Algérie	2015
31	LAFARGE Ciment d'Oggaz (LCO)	Supply electrical and automation cabinet- (MCC with Simocode) Kiln Cooling	Algérie	2015
32	LAFARGE Granulats	Electric & Automation Revamping of Primary and Secondary Crushers Kef Azrou	Algérie	2015
33	AAF France	Electric and Automation Replacement of Electrostatic Filter	Algérie	2015
34	Briqueterie Souakri Freres	MT / LV electrical and cement silos automation, bagging, palletising and concrete station	Algérie	2015
35	ASA/FCB France	Supply electrical equipments for new cement line Quatar 2	Quatar	2015
36	LAFARGE Holcim Sécurité	Security Audit for Lafarge Algeria (5 cement site)	Algérie	2015
37	FCB/ASEC Automation	Supply electrical equipments for new cement line Tula 2	Mexico	2016
38	Briqueterie Souakri Freres	Renovation of MV equipment and Substation P0	Algérie	2016
39	IBAU Hambourg/SCIS	Electrical and automation renovation - Expedition cement - cement plant Saida	Algérie	2016
40	IBAU Hambourg/SCHS	Electrical and automation renovation - Silos Homogenization - cement plant Hadjar Soud	Algérie	2016
41	Cement company of Hamma Bouziane (S.CI.HB)	Migration Software of control command system	Algérie	2017
42	AIN TOUTA	Electric & Automation Revamping - Kiln Lubrication system line 1 and 2	Algérie	2017
43	LAFARGE Holcim Nigeria	Supply of low HXR voltage motors	Nigeria	2017
44	TKIS Thyssenkrupp/SCIZ	Electrical and automation revamping - Zahana Cooler Line 2	Algérie	2017
45	IKN/SCHS	Electrical revamping - Hadjar Soud Clinker cooler line 2	Algérie	2017
46	Cement company of Zahana (S.CI.Z)	Replacement of Gas Analyzer	Algérie	2018
47	TKIS Sarreguemines	Electrical and Automation Engineering, electrical and automation supplies- New Limestone Crusher Hadjar Soud	Algérie	2018
48	AAF France	Electric and Automation Replacement of Electrostatic Filter- Cement factory of Benisaf	Algérie	2018
49	Aumund	Electric & Automation Revamping - Storage and transport Clinker - Cameroon	Cameroon	2018
50	Lafargeholcim	Renovation of LV panels (MCC and VF) - Cement Mill Workshop	Benin	2018
51	IKN/SCHS	Electrical revamping - Hadjar Soud Clinker cooler line 1	Algérie	2018
52	Lafargeholcim	Supply of spare parts	Benin	2018
53	Cement company of Sour El Ghozlane (S.C.SEG)	Supply, Assembly and Commissioning - Table Medium Voltage production line	Algérie	2019

Reference List : Spare Parts– 2008 à 2019

SPARE PARTS

N°	CUSTOMER	COUNTRY	YEARS
1	Cement company of Zahana (S.CI.Z)	Algéria	2009
2	Cement company of Chlef (S.CI.ECDE)	Algéria	2010
3	Cement company of Beni-Saf (S.CI.BS)	Algéria	2010
4	Cement company of Saida (S.CI.S)	Algéria	2010
5	Cement company of Zahana (S.CI.Z)	Algéria	2010
6	Cement company of Aïn El Kebira (S.C.AEK)	Algéria	2011
7	Cement company of Beni-Saf (S.CI.BS)	Algéria	2011
8	Cement company of Chlef (S.CI.ECDE)	Algéria	2011
9	Cement company of Sour El Ghozlane (S.C.SEG)	Algéria	2011
10	Cement company of Sour El Ghozlane (S.C.SEG)	Algéria	2012
11	Cement company of Sour El Ghozlane (S.C.SEG)	Algéria	2013
12	Cement company of Aïn El Kebira (S.C.AEK)	Algéria	2013
13	Cement company of Sour El Ghozlane (S.C.SEG)	Algéria	2014
14	Cement company of Beni-Saf (S.CI.BS)	Algéria	2014
15	Cement company of Hamma Bouziane (S.CI.HB)	Algéria	2014
16	AUTOMELEC MAROC	Marocco	2014
17	Cement company of Aïn El Kebira (S.C.AEK)	Algéria	2014
18	Cement company of Sour El Ghozlane (S.C.SEG)	Algéria	2015
19	Cement company of Chlef (S.CI.ECDE)	Algéria	2015
20	AUTOMELEC MAROC	Maroc	2015
21	Cement company of Beni-Saf (S.CI.BS)	Algéria	2015
22	Cement company of Aïn El Kebira (S.C.AEK)	Algéria	2015
23	Cement company of Tebessa (S.CI.T)	Algéria	2015
24	Cement company of Chlef (S.CI.ECDE)	Algéria	2016
25	Cement company of Aïn El Kebira (S.C.AEK)	Algéria	2016
26	Cement company of Tebessa (S.CI.T)	Algéria	2016
27	Cement company of Sour El Ghozlane (S.C.SEG)	Algéria	2016
28	AUTOMELEC MAROC	Algéria	2016
29	Cement company of Chlef (S.CI.ECDE)	Algéria	2016
30	AUTOMELEC ALGERIE	Algéria	2016
31	AUTOMELEC MAROC	Algéria	2016
32	Cement company of Chlef (S.CI.ECDE)	Algéria	2017
33	Cement company of Aïn El Kebira (S.C.AEK)	Algéria	2017
34	Cement company of Hamma Bouziane (S.CI.HB)	Algéria	2017
35	Cement company of Sour El Ghozlane (S.C.SEG)	Algéria	2017
36	Cement company of Tebessa (S.CI.T)	Algéria	2017
37	Société de ciements de Saida (S.CI.S)	Algéria	2017
38	Cement company of Hamma Bouziane (S.CI.HB)	Algéria	2018
39	Cement company of Sour El Ghozlane (S.C.SEG)	Algéria	2018
40	Cement company of Aïn El Kebira (S.C.AEK)	Algéria	2018
41	Cement company of Tebessa (S.CI.T)	Algéria	2018
42	Thyssenkrupp	Algéria	2019
43	Cement company of Tebessa (S.CI.T)	Algéria	2019
44	Lafarge	Benin	2019
45	Cement company of Sour El Ghozlane (S.C.SEG)	Algéria	2019



- Engineering
- Supplies:



- Variable speed drivers ABB
 - 75 kW x1
 - 90 kW x2
 - 160 kW x1
 - 200 kW x 6
 - 110 kW x 2
- Power cables
- Control and instrumentation cables
- Junction boxes
- Local control boxes
- Remote Input/output equipment's
- Modification of existing power boxes (MCC)
- Modification of the existing control panels
- Modification of existing ACC panels
- Integration of new applications in existing ABB AC450
- Integration of new applications in existing operator stations ABB AS520
- Supervision
- Commissioning and start-up



- Installation
- Commissioning and Start-up



Revamping ; Supplies and installation of new lighting system for entire cement factory



- ✓ 8 Transformers LV/LV 63 kVa
- ✓ 8 Transformers LV/LV 40 kVA
- ✓ 1 Transformers LV/LV 25 kVA
- ✓ 9 Lighting panels :
 - S/S Homogenization
 - S/S Dryer
 - S/S Raw Mill
 - S/S Kiln
 - S/S Cooler
 - S/S Cement Mill
 - S/S Packing
 - S/S Utilities
 - S/S Crusher
- ✓ Lighting equipment's
- ✓ Cables
- ✓ Earthing
- ✓ Cable trays and tubes



Revamping of three (3) stackers

- ✓ **Limestone**
- ✓ **Clay**
- ✓ **Mixing**

Engineering, supplies, installation and commissioning of the (3) stackers.

Nos prestations:

- Engineering and Programming.
- Supplies:
 - Electrical panels
 - Cable drum and motor
 - Sensor
 - Cables and accessories
- Supervision of installation
- Commissioning and Start-up





SCIZ - CEMENT FACTORY OF ZAHANA - ALGERIA: 2011 & 2011
New filter for clinker cooler

Supplies and Services	
•	Medium voltage panels
•	Transformer MV/LV
•	Multi drive panels 274 kW + 2 Motors 274 kW + 17 Motors 33 kW
•	LV equipments
•	Automation materials
•	Accessories and different materials
•	Cables and cables accessoires
•	Cable tray
•	Eclairage
•	Engineering and Programming
•	Supervision of installation
•	Commissioning and Start-up



SCIS – CEMENT FACTORY OF SAIDA - Algérie: 2011

New filter for clinker cooler

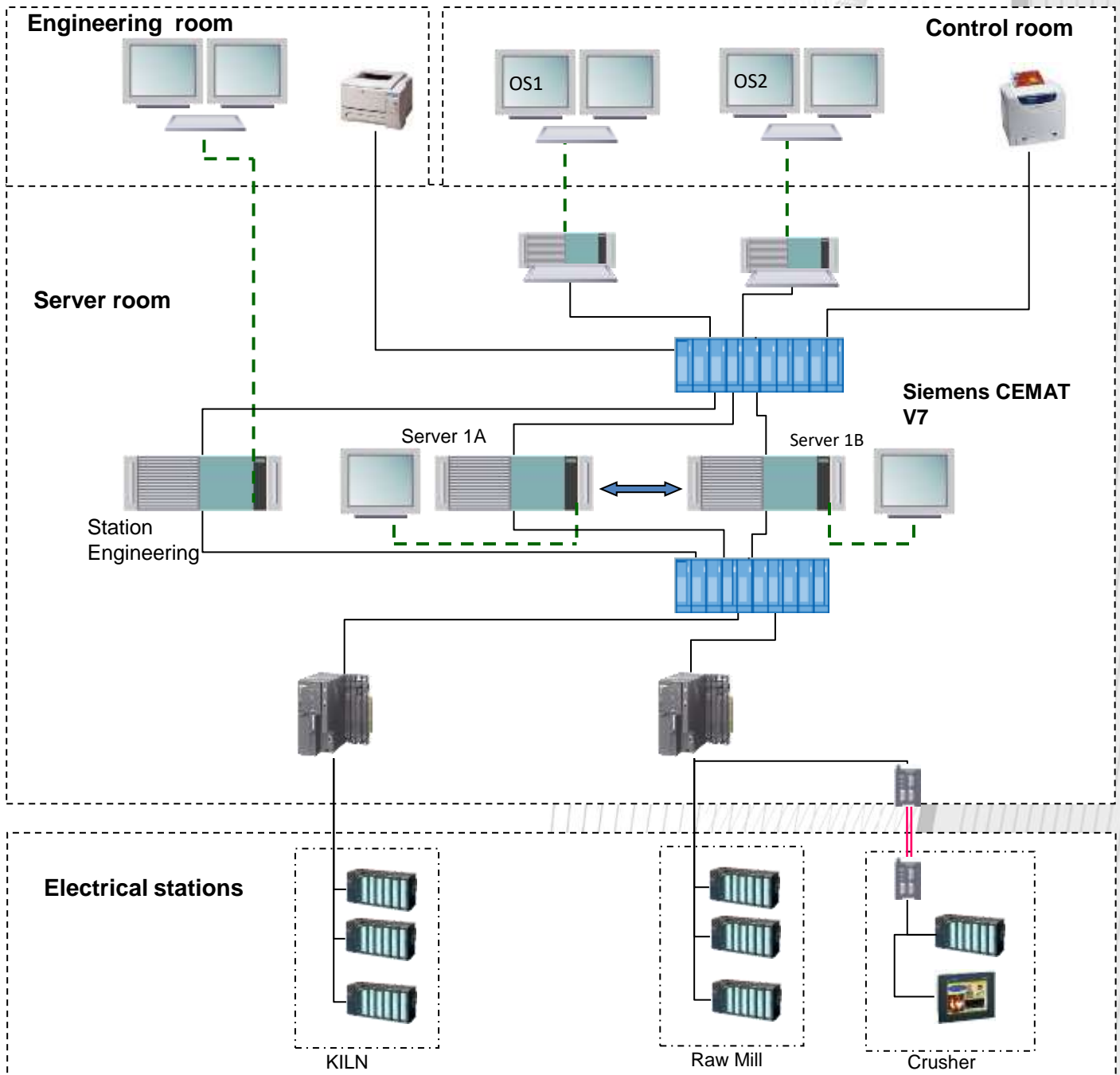
Supplies and Services	
•	Variable speed drives and motors
•	LV Equipments
•	Automation materials
•	Different equipments
•	VCS boxes
•	Cables and accessories
•	Cable trays
•	Lighting equipments
•	Engineering and programming
•	Supervision of installation
•	Commissioning and Start-up





Revamping of control command system - cement line wet process

Scop of works
• Automation
• Different equipments
• Instrumentations
• Cables and accessories
• Engineering and programming
• Installation
• Commissioning and Start-up

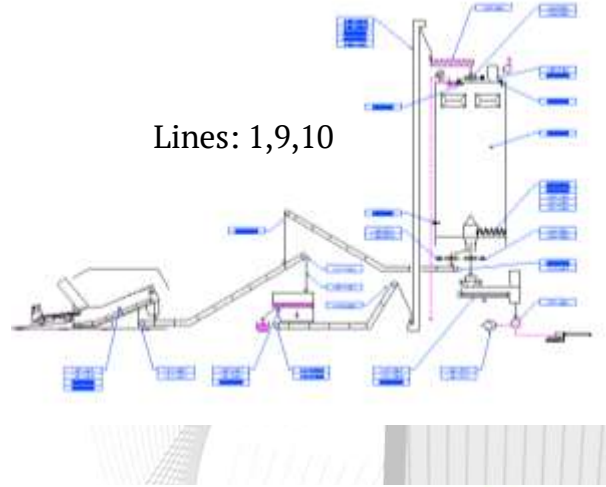


Wood chip handling system Kiln's 1,9,10,5-6,7-8

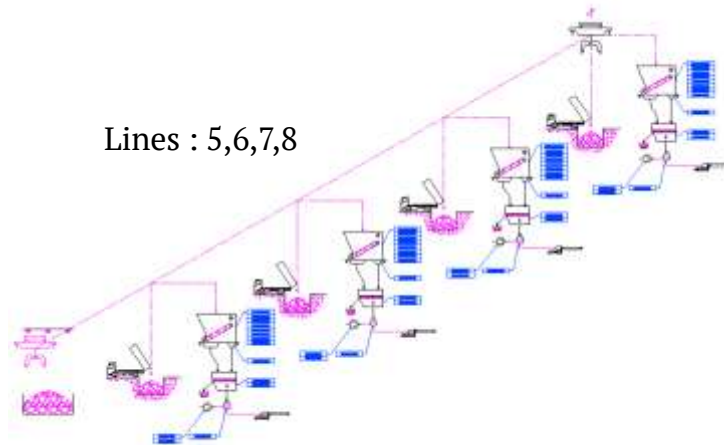
Scope of work

- MCC panels
- ACC panels
- PLC panels
- UPS and Auxiliary transformers
- Instrumentations
- Local control boxes
- Control and power cables
- Electrical engineering
- Automation engineering

Lines: 1,9,10



Lines : 5,6,7,8



Architecture system x 4

- Line 1 PLC S7 315-2PM/DP
- Line 5,6,7 and 8 PLC S7 317-2PM/DP
- Line 9 PLC S7 315-2PM/DP
- Line 10 PLC S7 315-2PM/DP

LINE N°1

LINE N°9

LINE N°10

LINE N°5-6-7-8

Option: Four lines 5,6,7,8

S7 315-2 DP/PM

VSD X5

S7 315-2 DP/PM

VSD X5

S7 315-2 DP/PM

VSD X6

S7 317-2 DP/PM

VSD X12

PLC Crane

	Line 1		Line 9		Line 10		Lines 5, 6, 7, 8		Total	
	Carte	IO	Carte	IO	Carte	IO	Carte	IO	Carte	IO
DI	32 ch	9 288	8	256	8	256	12	384	37	1184
DO	32 ch	4 128	3	96	3	96	6	192	16	512
AJ	8 ch	3 24	3	24	3	24	4	32	13	104
AO	4 ch	4 16	4	16	4	32	8	32	20	96
		456		352		400		640		1896
Dummy	2		2		2		2			
Stackers							4			
Total cartes	22		20		20		36			

© FCB Bourgneon

Date: 08/01/12
Version: 4
Révision: 04/01/2012 14:14

MORAVOUCHEMENT Project
Wood chip handling systems kilns 1,9,10,5-6,7-8



Projects :
Mixing white-gray cement workshop
&
Pozzolana



The object of this Contract is the "turnkey project" realization of the electricity, instrumentation, automation system equipments. The project includes the supervision of different packages, installation of a 120m³ limestone storage, a 2200m³ premix storage, pneumatic transport up to grinding of gray cement, a 60 m³ hopper, its extraction to two feeders, the new air slides lines leading to three air lifts (two existing and one new) then to a new line of air slide located at the top of the silos cement storage, And includes:

Object of contract it was the realization "turnkey project" of electrical equipments, instrumentations, automation and supervision of installation of two new hoppers of 100m³ for feeding of two feeders, And includes:

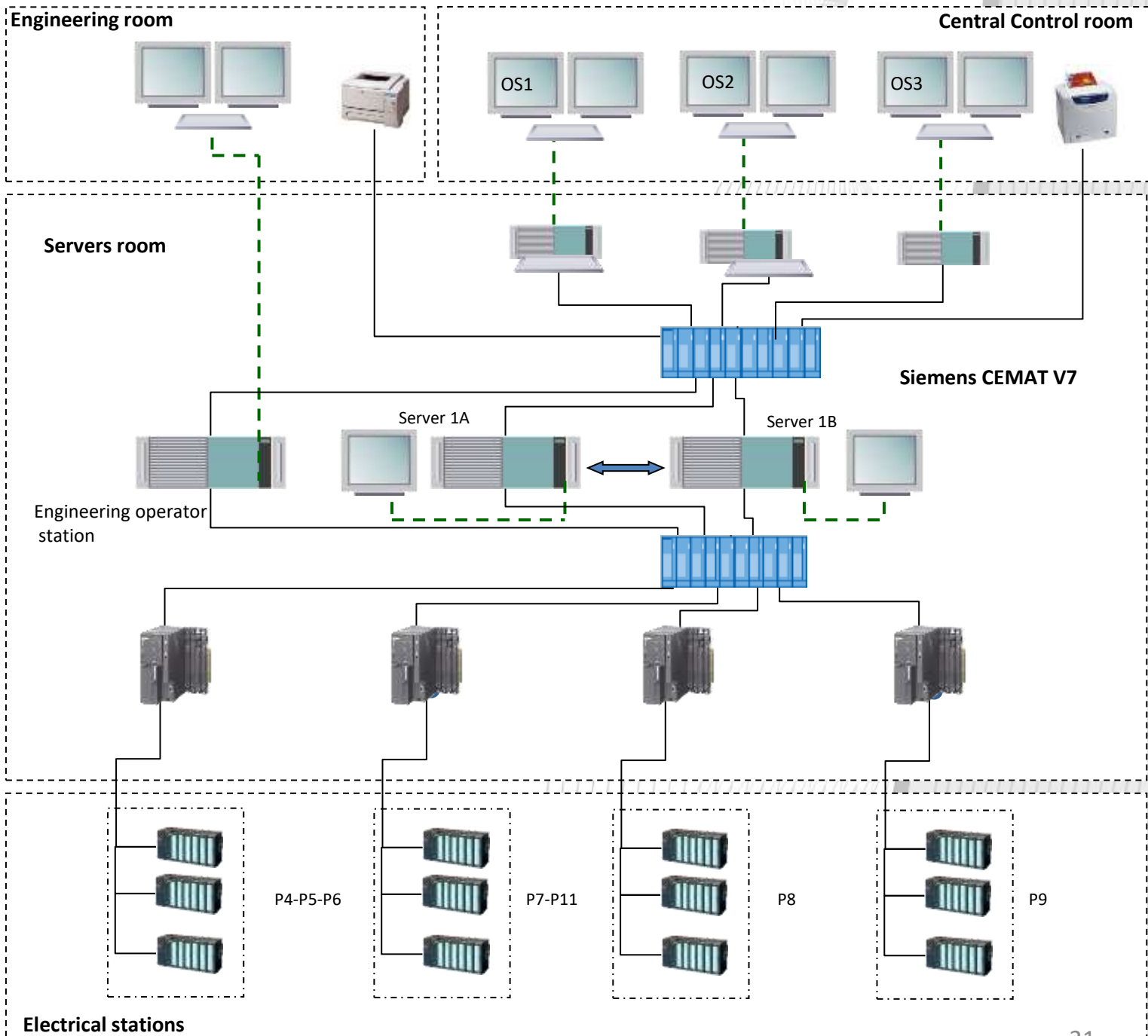
- ✓ Supplies, installation and connection of electrical equipments (MCC Siemens Sivacon 8 PV), automation equipments and the supervision (Siemens S7, Level 2 FLSA).
- ✓ Installation and connections instrumentation equipments.
- ✓ Supplies, installation and connection of power cables, control cables, communication and instrumentation cables.
- ✓ Supply and installation of cable trays and accessories.
- ✓ Supply and installation of earthing system.
- ✓ Supply and installation of lighting system.
- ✓ Realization of electrical and automation engineering, level 3 programming and development of existing synoptics
- ✓ The electrical test, commissioning, test without load, test with material and start-up





Revamping of control command system cement line dry process process

Scope of work
• Automation
• Different equipments
• Instrumentation
• Cables and accessoires
• Engineering and programming
• Installation
• Commissioning and Start-up



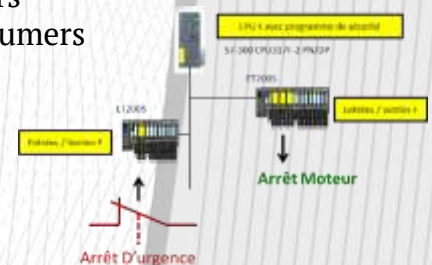
Replacing the control command system and supervision of the long belt conveyor between deviator and sampling station of cement factory.

The control command system consist of following electrical equipments :

- ✓ Main LV distribution panel
- ✓ Control command panels
- ✓ LV panel in the proximity of belt conveyor (TN2)
- ✓ LV panel in the proximity of sampling station (TN5)
- ✓ LV and Control panel in the proximity of belt conveyor TN5 (ME1)
- ✓ LV and Control panel in the proximity of belt conveyor TN4 (ME2)
- ✓ LV and Control panel in the proximity of belt conveyor TN3 (ME3)
- ✓ LV and Control panel in the proximity of belt conveyor TN2 (ME4)
- ✓ LV and Control panel in the proximity of belt conveyor TN2 (ME5)

Scope of work included :

- 1) The engineering for revamping utilizing new generation of Siemens materials
- 2) The supply of material and equipments listed below:
 - New control command system connected to the actual system
 - New CPU and Input / Output cards replacing the existing automation system
 - Five (5) panels including automation materials for the belt conveyors
 - Two (2) panels including automation materials for the 2 filters
 - Instrumentations necessary for the security of different consumers
 - Supply of cables
 - Between panels and sensors
 - Between panels (profibus and fiber optic)
 - Cable trays necessary for this installation
- 3) Dismantling of existing equipment's
- 4) Services including supervision and installation of new equipment's
- 5) Commissioning and Start-up of new system in collaboration with electrical department of cement factory
- 6) Packing and delivery FOB of electrical equipment's and materials



Replacing of MCC panel for Raw Mill 2

Integration of MCC intelligent modules in the PLC system control commande of RM2

- ❑ Electrical engineering for MCC panel
- ❑ Automation engineering and programming in existing PLC system
- ❑ Dismantling of existing control panels 12BT4.1 and 12BT4.2
- ❑ Dismantling of existing power and control cables
- ❑ Supply and installation of new equipment's
- ❑ Installation of power cables, control and communication cables
- ❑ Supply of spare parts
- ❑ Test and commissioning of electrical and automation equipment's
- ❑ Packing and delivery FOB of materials



Supply, installation and commissioning of variable speed drive ABB 1200 KW for kiln primary fan



Electrical and automation equipments
Phase 1 - Rehabilitation works to improve
production and security of cement packing
terminal



Filiale du groupe:



Item	Désignation
	Phase I - Price for maintaining the reliability of the terminal
1	High voltage power cable
2	Haver Electrical panel - rehabilitation
3	Compressors - supplies two soft starter cabinets
4	Replacement of the power cables for the 2 local boxes
5	Rearrangement of existing power and control cable in the compressor room
6	Protective cover for existing cables trenching
7	Filter at the top of the silo - rehabilitation of filter and power cables
8	Renovation of lighting system
9	Bulk unloading – rehabilitation of electrical equipments
10	Rehabilitation of earthing system
11	Packing + Transport
12	Installation + Commissioning and Start-up

Phase 2 - Supply and installation of new LVDB



Filiale du groupe:



Item	Désignation
	Phase II – Revamping of LVDB
1	Dismantling of existing panel and cables
2	Installation of new LVDB
3	Insulation test of power cables
4	Connection of power cables
5	Test of panel
6	Commissioning

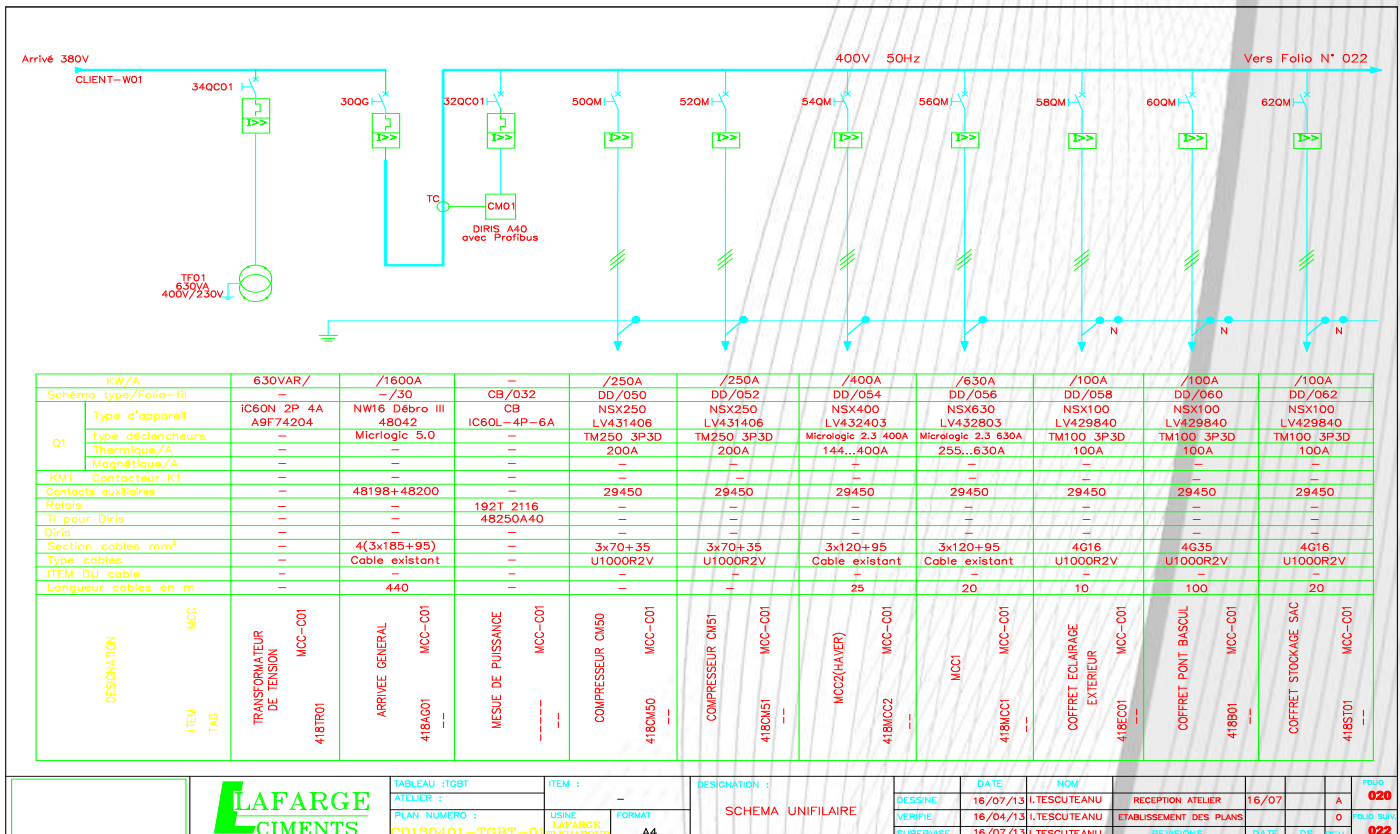


TABLEAU :TGBT
 PLAN NUMERO :
 CD130401-TGBT-01

ITEM :
 DESIGNATION :
 SCHEMA UNIFILAIRE

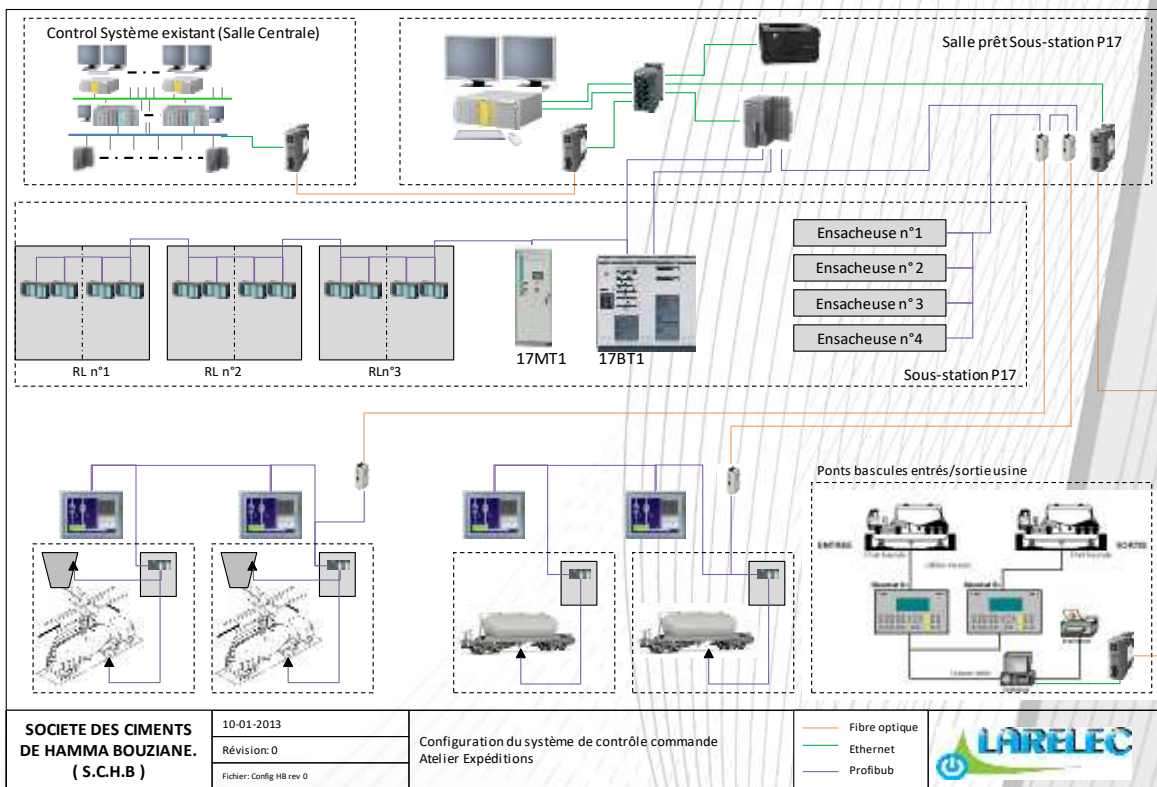
DESSINE	DATE	NOM	RECEPTION ATELIER	16/07	020
VERIFIE	16/07/13	I.TESCUTEANU	ETABLISSEMENT DES PLANS		A
SUPERVISE	16/07/13	I.TESCUTEANU	REVISIONS	DATE DS	REV. 022

AUTOMATISATION OF PACKING WORKSHOP

- ❑ Supply of electrical equipments and materials :
 - ✓ MV cell 5,5 kV and power cables
 - ✓ Replacement of complete automation system:
 - PLC panels including the PC/Server and communication module
 - 21 inches Screens and printers
 - CPU S 7-400 and Ccommunication module
 - External Control desk and communication cables
 - Interface with different external equipments
 - Connexion of new control system to the existing control system
 - All digital and analogue PLC panels
 - ACC panels and it's distribution 220VAC and 24VDC
 - UPS and it's auxiliary transformers
 - All digital and analogue sensors
 - Cables and accessories
 - Power and control cables trays
 - Earthing system
 - Ligthing system and Power sockets
 - LV distribution panels
 - Power and control cables
 - Air conditions and ventilation system of electrical station P17 and Control Room
 - Manual extractions registres of 6 silos
 - Spare parts
 - Packing and delivery FOB

- ❑ Dismantling of old electrical equipment's, cables, accessories.
- ❑ Supervision during the installation of new electrical equipment's, cables and other accessories listed above.
- ❑ Commissioning and start-up of electrical equipment's in cooperation with technical staff of the factory

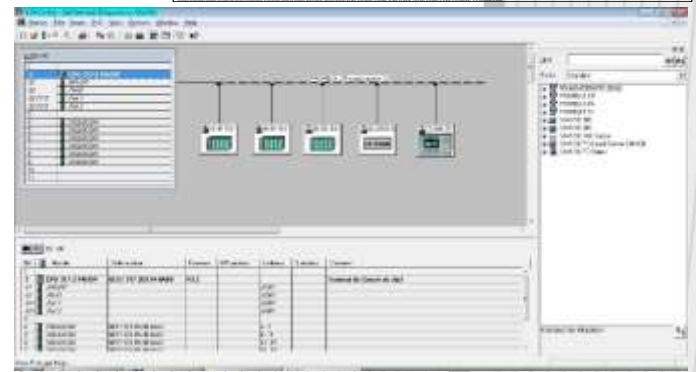
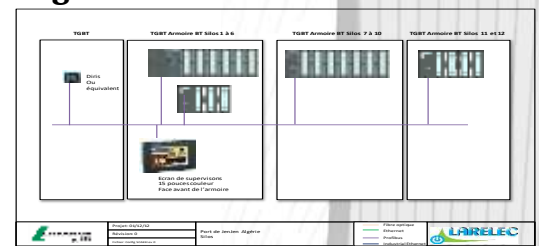
COMMISSIONING
2014





Supplies and services for renovation of 12 cement silos, including the cement extraction and auxiliary installations

- ✓ Supply of one LVDB for 380V distribution
- ✓ Supply of three LV panels including individual automations
- ✓ Set of local control boxes and junction boxes
- ✓ Set of power and control cables
- ✓ Set of cables trays, earthing and Lightning systems
- ✓ Lighting system
- ✓ Electrical and Automation engineering's
- ✓ Automation programming
- ✓ Installation, commissioning and Start-up
- ✓ Training



Power socket

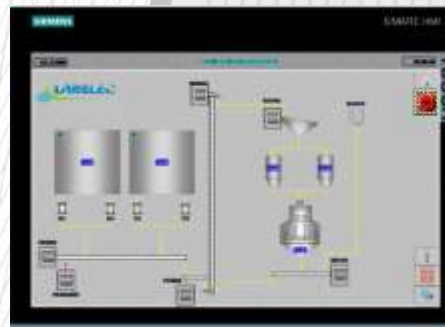
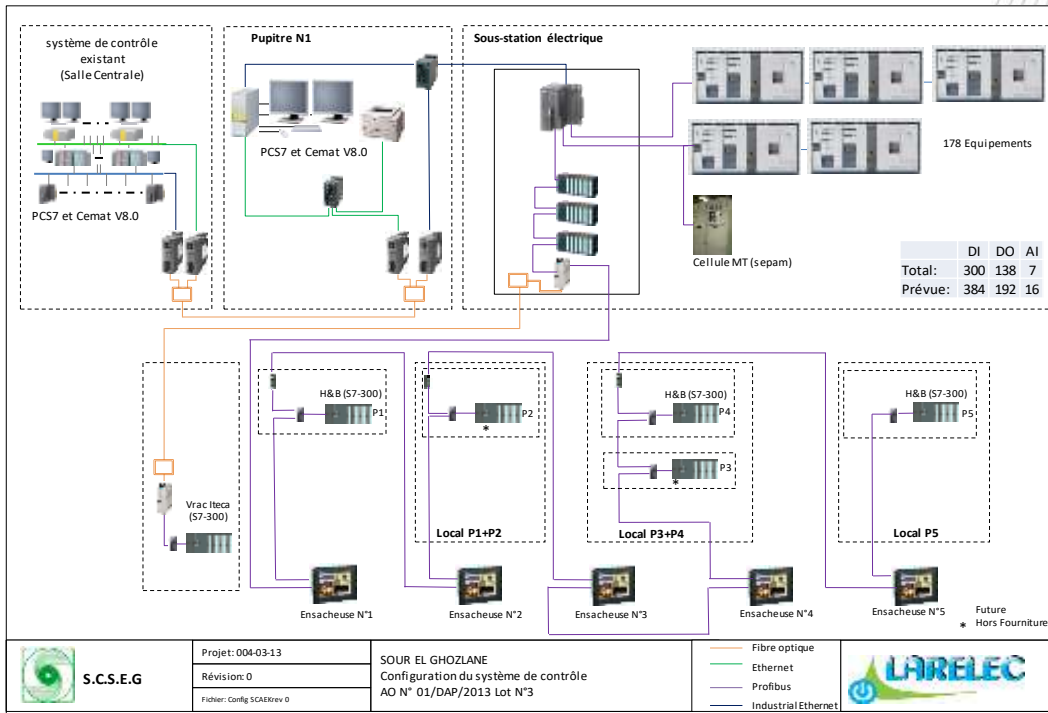
Lighting panel



REVAMPING OF CONTROL SYSTEM FOR PACKING AND BULK LOADING WORKSHOPS

- ✓ Electrical and automation engineering's
- ✓ Supply of new MCC panels and capacitor banks
- ✓ Supply of automation control commande system, including:
 - Digital/Analogue PLC and network panels
 - Supervision screens and operator stations
- ✓ Interface panel with different auxiliary consumers
- ✓ Connections of new PLC and network panel to the existing central control room
- ✓ ACC panel, auxiliary transformers and UPS
- ✓ Power, control, instrumentation and communication cables
- ✓ Cable trays and earthing system
- ✓ Spare parts for commissioning and 2 years operation
- ✓ Packing and delivery FOB
- ✓ Dismantling of existing equipments, cables, sensors and control desk
- ✓ Supervision of installation, commissioning and start-up
- ✓ Training of packing operators and control system engineers

COMMISSIONING
2015





COMMISSIONING
2015

Revamping of electrical and automation equipments for the following workshops

- Crusher limestone
- Crusher Iron-ore
- Water station
- Power distribution (Workshop A)
- Packing workshop

Also :

System migration from PCS7-V6.1 and CEMAT to the new version PCS7-V8

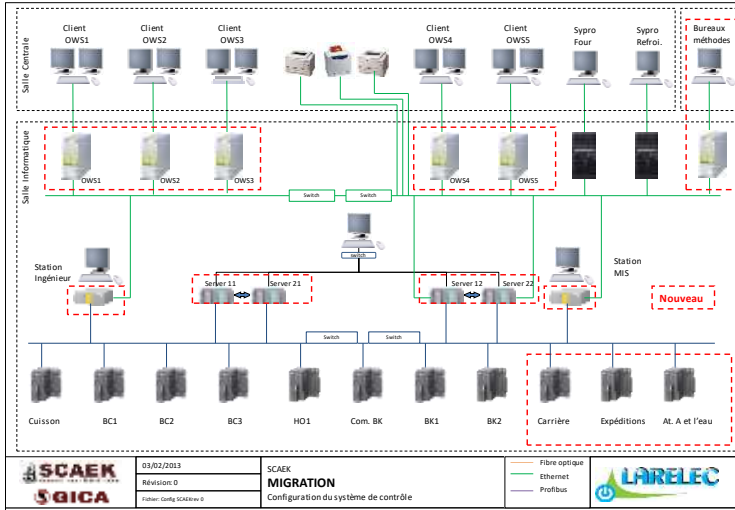
Services:

- ✓ Complete engineering for the revamping purpose
- ✓ Supply of new MCC panels for above listed workshops (Siemens S8)
- ✓ Supply of power and control cables
- ✓ Supply of the control command system for above listed workshops, including:
 - Panel PC/ Server
 - Automation panels including cards for modification of existing PLC's
 - Screens for operator and engineering stations
- ✓ Interface with different existing equipment's
- ✓ Connection of the new system to the existing control command system
- ✓ PLC digital and analogue panels including data acquisition modules
- ✓ ACC panels for distribution of 220V and 24V, auxiliary transformers and UPS
- ✓ Instrumentation digital and analogue sensors
- ✓ Power, control, instrumentation and communication cables
- ✓ Cable trays and earthing system
- ✓ Control desk furnitures for the three local control rooms
- ✓ Migration of control system PCS7-V6.1 and CEMAT to the version PCS7-V8
- ✓ Supply of different variable speed drives panels and motors
- ✓ Spare parts for commissioning and 2 years operation
- ✓ Packing and delivery to FOB
- ✓ Dismantling of all electrical equipment's, cables sensors and auxiliary cables
- ✓ Supervision of electrical installation equipment's above listed
- ✓ Commissioning of new equipment's in collaboration with cement factory technical staff
- ✓ Training for electrical, automation staff.

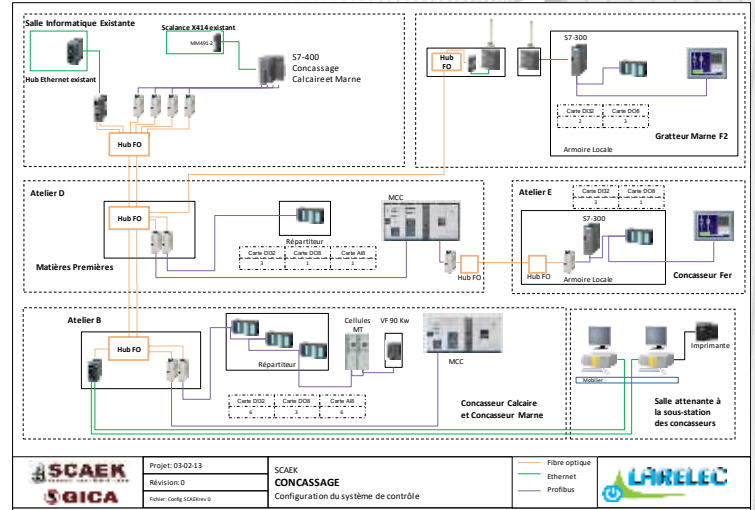


Ain El Kebira Algeria - SCAEK

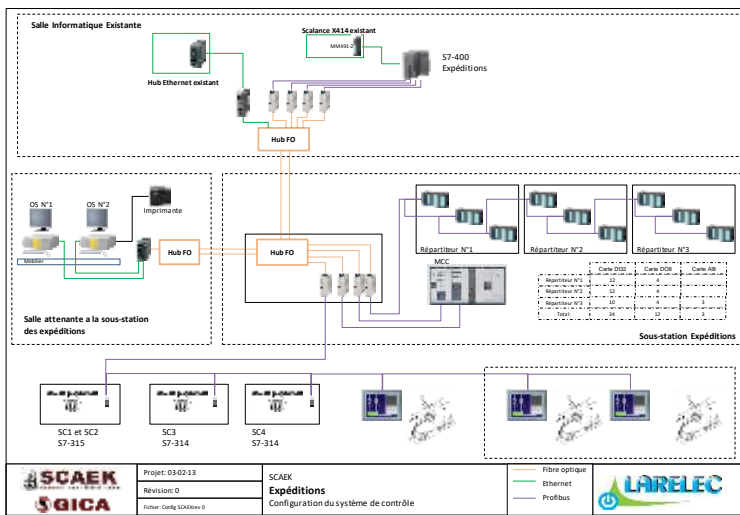
Part 1: Migration of control system Siemens



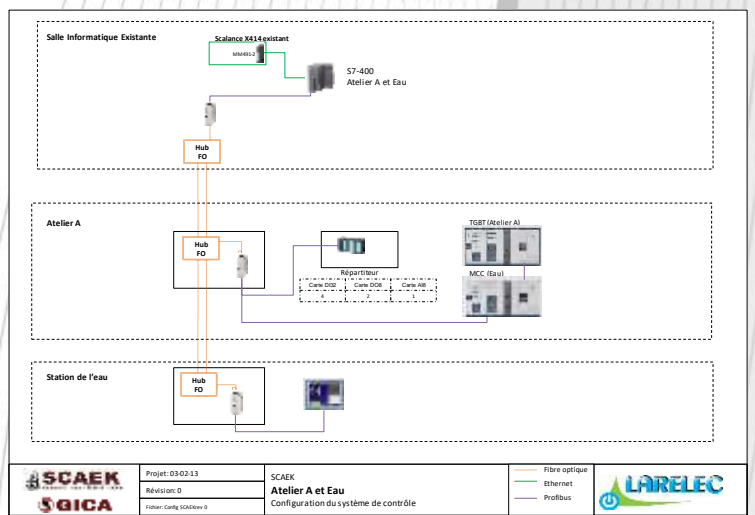
Part 2: Crushers Revamping



Part 2: Packing Revamping



Part 3: Revamping Workshops: A and Water

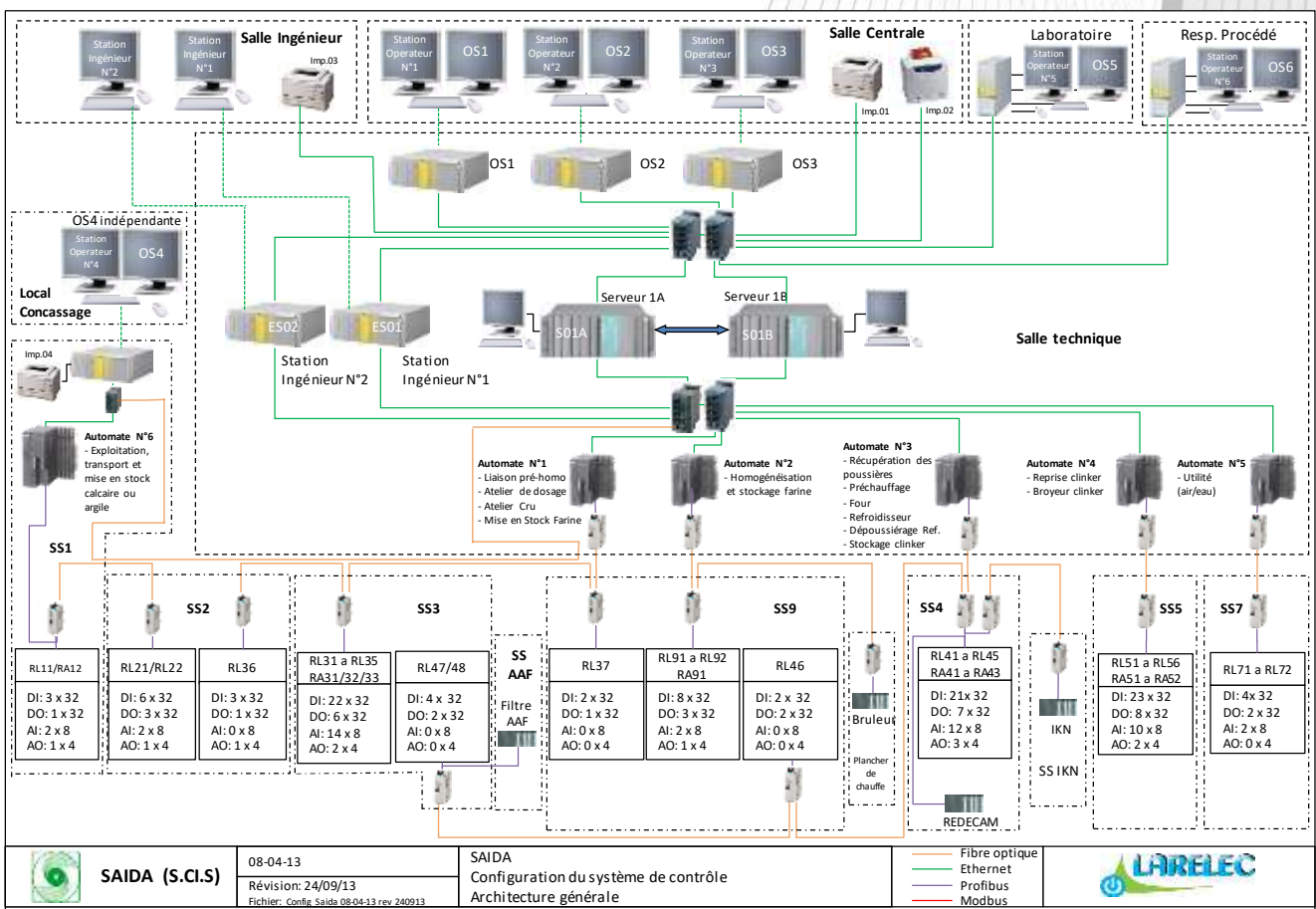




**COMMISSIONING
2015**

SAIDA Revamping of control commande system General Architecture

- ✓ Electrical and Automation engineering and Programming
- ✓ Supply of complete set of automation materials, including:
 - Servers et switches
 - Operator and engineering stations
 - Screens 23" and modules for remote screens
 - Printers
 - CPU's and Input/Output modules including the interface modules
- ✓ Cables and accessories
- ✓ Supply of 3 UPS, cables and accessories
- ✓ Supply of spare parts for 2 years operation
- ✓ Dismantling of old equipments in the control room
- ✓ Modifications in the existing control panels
- ✓ Installation of the new equipments
- ✓ Commissioning for entire cement production line
- ✓ Training for the cement factory staff (operation and engineers)
- ✓ Warranty after sales for all equipments installed



CERALG Revamping of Cement terminal of ARZEW Algeria: 2014



COMMISSIONING
2015

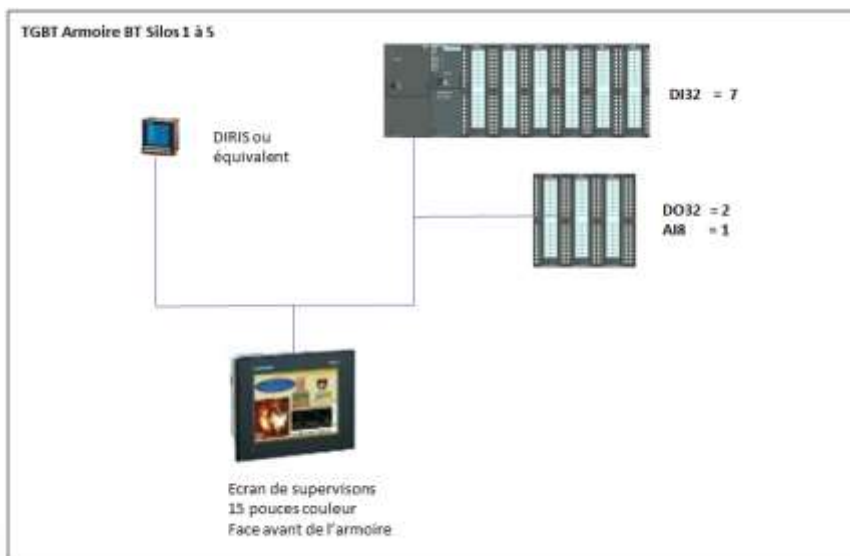


LV /Control panel



Works for revamping of 5 cement silos, including the silos extraction and auxiliaries

- ✓ Supply of one LV panel for power distribution
- ✓ One PLC panel including automation materials and one screen TP 1500
- ✓ Set of local control boxes and jonction boxes
- ✓ Set of power and control cables
- ✓ Set of cable trays and accessories
- ✓ Earthing system
- ✓ Lightning system
- ✓ Ligthing equipments
- ✓ Electrical and Automation engineerings
- ✓ Programming of PLC
- ✓ Installation and commissioning
- ✓ Training



AUDITS

Electrical and Security Audit

Realisation of 5 audits for Lafarge Algeria

Site Audit , Analysis of electrical equipments, Conformity reports and Recommendations



Concrete stations

Reghaia

DOMAINE AGRICOLE OULED HEDADJ
REGHAIA 16000

Senia

CENTRE COMMERCIAL BAB EZZOUAR
TOUR 2, 6EME ETAGE
Bab Ezzouar 16132

BBA RMX PLANT

LOT 10 & 11 Zone Industriel Route de M's
BBA 34000



Quarry

Site Granulat de Kef Azrou

KEF AZROU EL M'HIR
BORDJ BOU ARRERIGJ 34000



Bag factory

LAFARGE SAC (LS)

CENTRE COMMERCIAL BAB EZZOUAR
TOUR 2, 6EME ETAGE
Bab Ezzouar 16132

Points diagnostiqués

Medium voltage equipments (Poste Sonelgaz, transformateurs)

- Leaks
- Conformity and electrical priming
- Relieving

Local stations and MV/LV materials

- Temperature, humidity
- Storages conformity
- Lighting and security lighting
- Non-electrical ducts

Protection against indirect contacts risks

- Operation procedures
- PPE , mats, gloves... etc.
- Safety Lock out/Tag Out Procedures , plans and maneuvering
- Insulation
- Electrical distribution conformity
- Lighting conformity
- Power sockets conformity

Protection against direct contacts risks

- Earthing conformity
- Earthing, equipotential bonding and earth conductor
- Power Surge Limiters
- Permanent insulation controlers
- Residual current differential devices
- Selectivity of protections
- Circuit separation

Protection against risk of burns, fire and explosion

- Abnormal heating
- Overload and short circuit protection
- Cutoff power
- Switching and control devices
- Specific requirements for premises and electrical station for the risk of fire

Security installations

Lighting

Electrical distributions

Others installations

General

- EPI
- Environment

Supply of one Low Voltage panel for feeding of 24 cooling fans zones
Grey Cement Clinker kiln

COMMISSIONED
2015

MCC panel (fixe power starters - type Larelec):

MCC steel panel SPACIAL SAREL IP 55, equipped with:

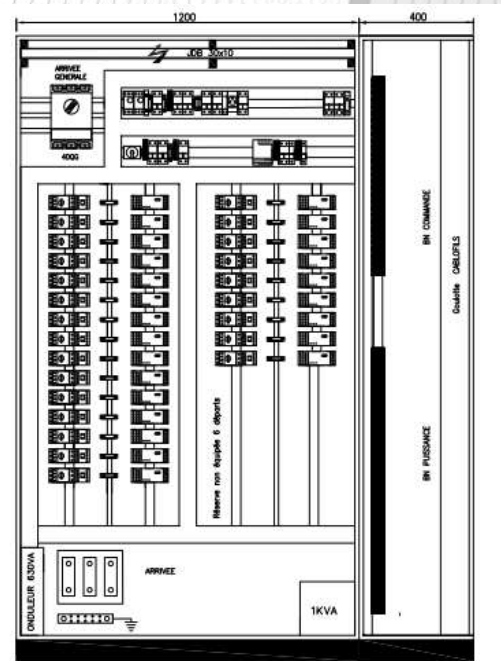
- Busbar 3 poles, 400A / 50kA
- Main circuit breaker 3 poles, 400A with rotary handle commande
- UPS 380/220V, 630VA
- Circuit breakers and distribution 220V AC et 220V UPS
- Module power supply 24Vcc, 5A
- Circuit breakers and protections for distribution 24Vcc
- Indication led lamps for status of motor starter : Available and Running
- Internal lighting and ventilation
- 24 motor starter 7,5 kW, fixed types equipped with : circuit breakers, contactors, protection relay Simocode Pro C

Components origins: Siemens

SIMOCODE - compact motor management system for direct motor starters



Construction phase

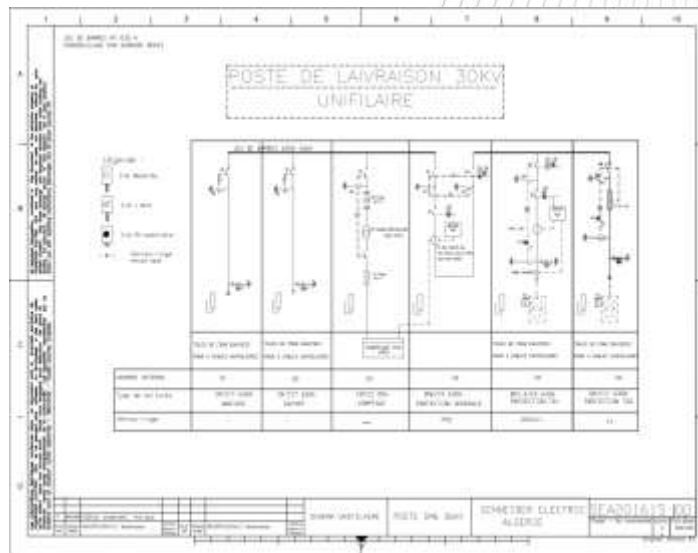


Revamping of 2 crusher production lines Kef Azrou

- **Production line 1 – Primary/Secondary crusher**
- **Production line 2 – Tertiary crusher**

As part of this modernization, our services include :

- Supply MT cells for main station 30kV
- Supply of LV electrical cabinets production line
- Supply of LV electrical cabinets production line Primary / Secondary
- Supply of LV electrical cabinets production line Tertiaire
- Supervision assembly of electrical equipment
- Civil Engineering Construction: MV Main Station, Electrical Substation and Transformer rooms for Primary / Secondary Line and Tertiary Electrical Substation
- Installation of all MV / LV equipments, Transformers 1250kVA and 800kVA
- Installation of Siemens control commande system
- Supply and installation of instrumentation sensors
- Supply and installation of power, control and communication cables
- Supply and installation of cable trays and accessories
- Supply and installation of new earthing system
- Commissioning and Start-up



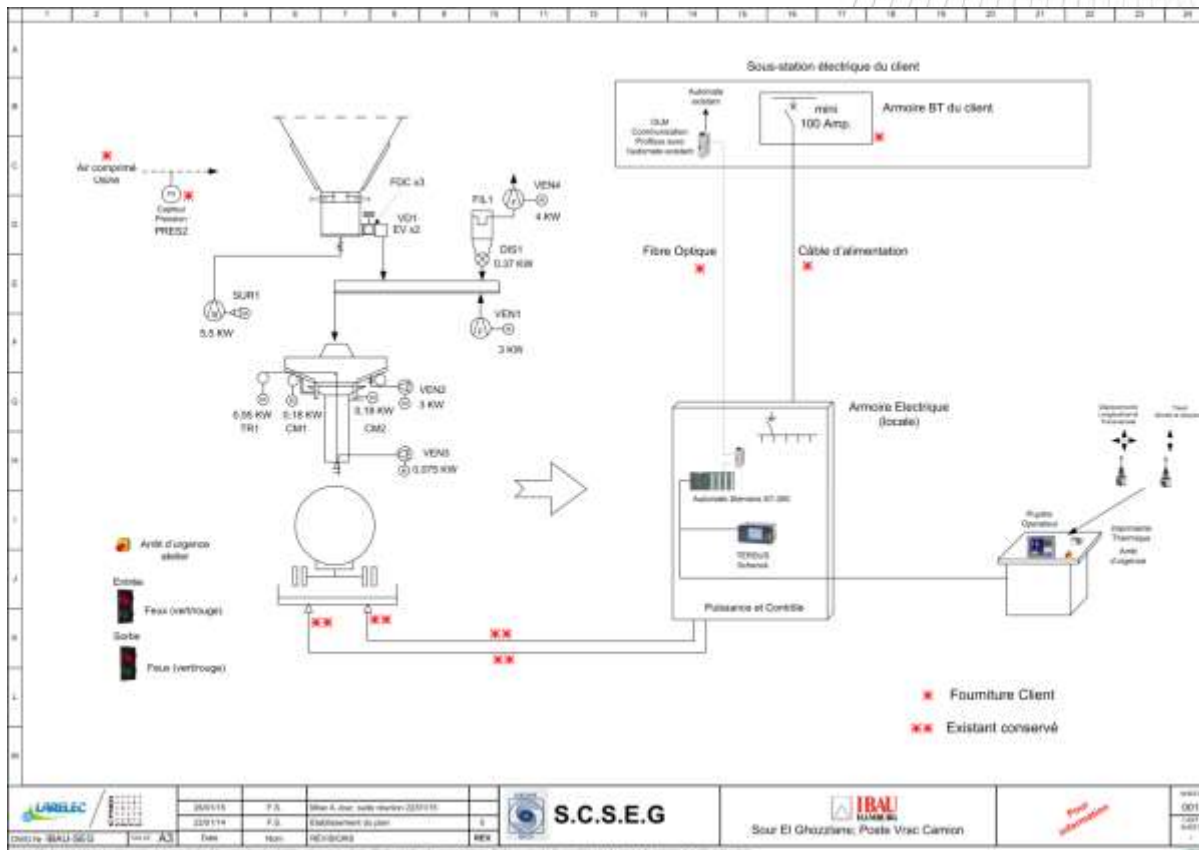
Sour El Ghozlane Algérie

COMMISSIONING
 2016

Revamping of electrical and automation equipments for the bulk loading

As part of this renovation, our supplies and services includes:

- Supply of one LV panel with it's own automation control system
- 1 control desk, Warning and emergency stop system
- Set of power, control and communication cables
- Set of cable trays and Earthing system
- Electrical and Automation engineering
- Programming
- Commissioning and Start-up



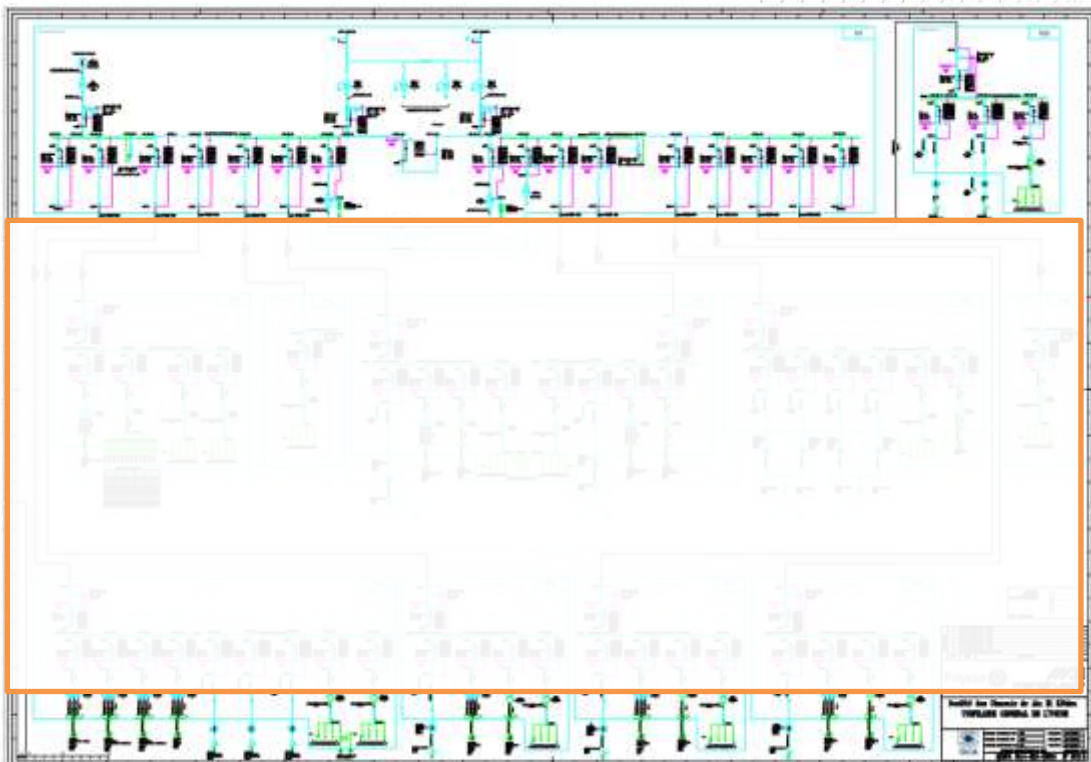


New Cement factory of Kebifa Algérie
Installation of electrical equipments for main substation P0

**COMMISSIONING
2016**

Our supplies and services includes:

- Installation supervision of all electrical equipment's
- Installation of MT and LV equipment's, digital and analogue PLC, LV distribution panels, UPS and Lightings
- Installation of MT/LV distribution transformers
- Installation of power generator group
- Installation of control command desk in local control room
- Set of cables
- Set of cable trays
- Earthing system
- Commissioning and Start-up

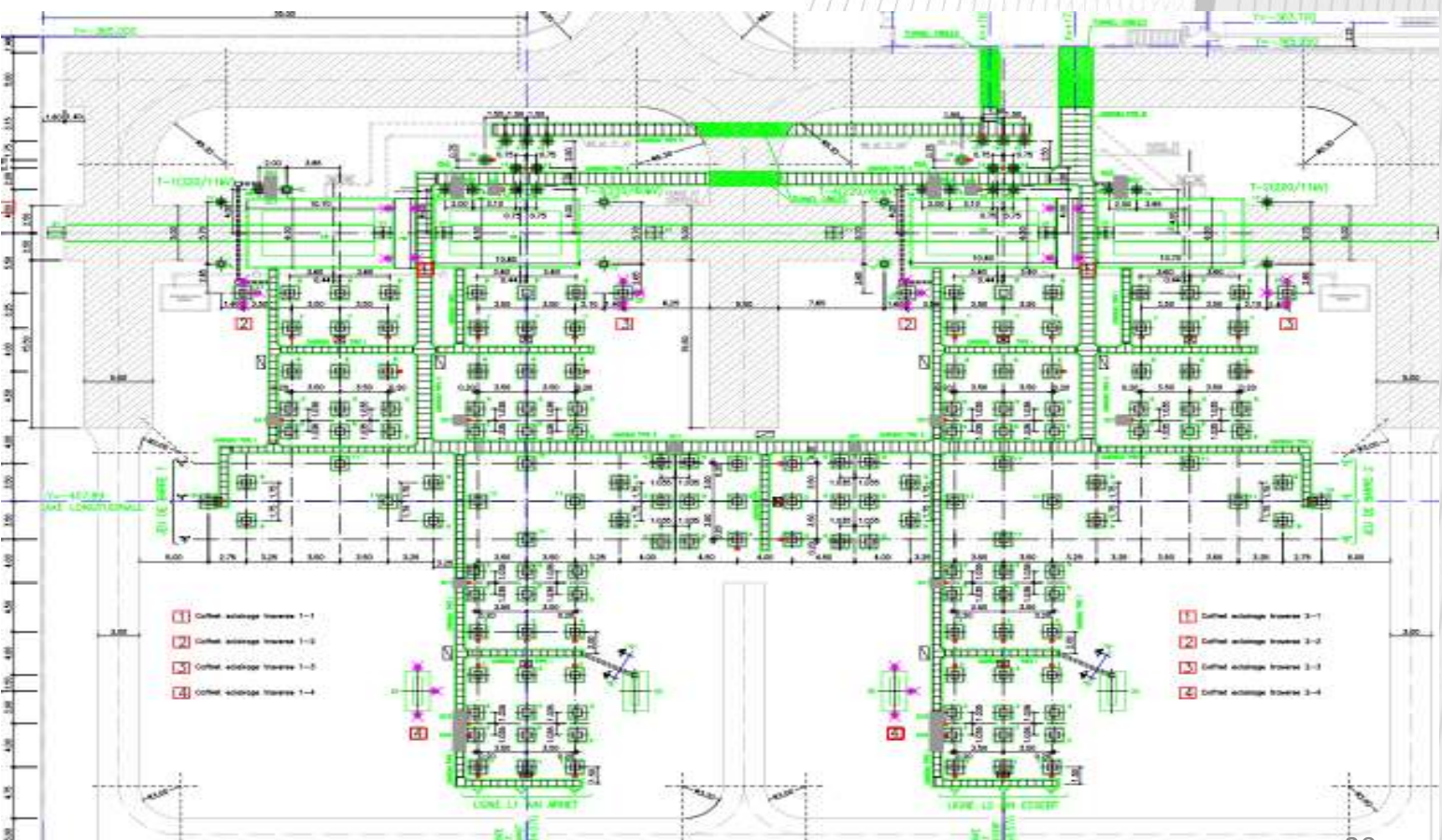
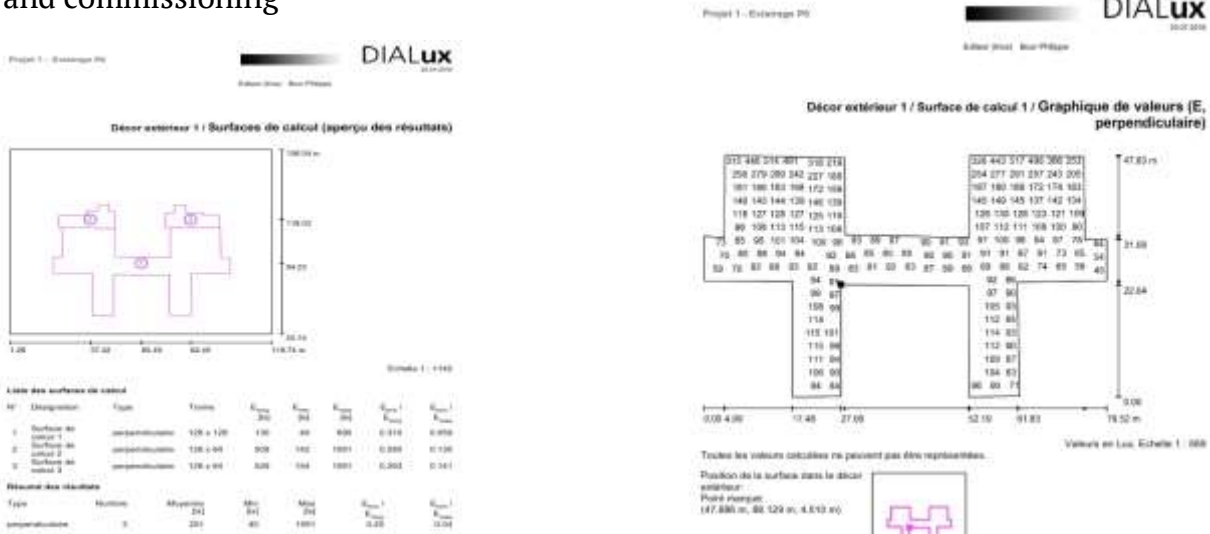


New Cement factory of Kebifa Algérie Installation of lighting system for HV area of P0

COMMISSIONING
2016

As part of this renovation, our supplies and services includes:

- Supply of external lighting equipments of main station P0
- Set of cables and cable trays
- Installation of lighting equipments
- Test and commissioning

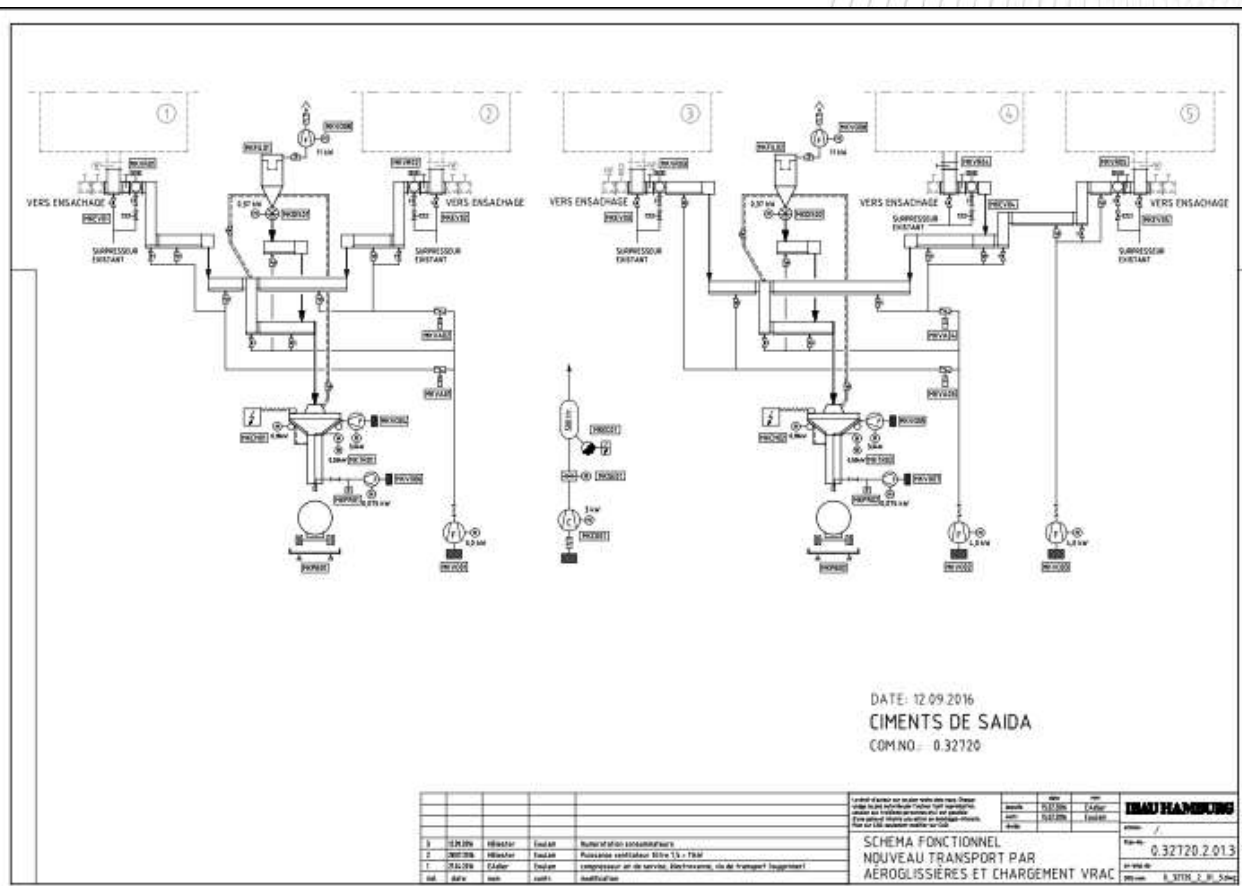


Cement Silos SAIDA

Renovation of electrical and automation equipment's for cement silo extraction and weighing bulk system

Our supplies and services includes:

- Supply of one LV panels including the automation materials
- 2 control desk including the operator station
- Warning and emergency stop equipments
- Set of power, control and communication cables
- Lot of cable trays and earthing system
- Electrical and Automation engineerings
- Programming
- Commissioning and Start-Up



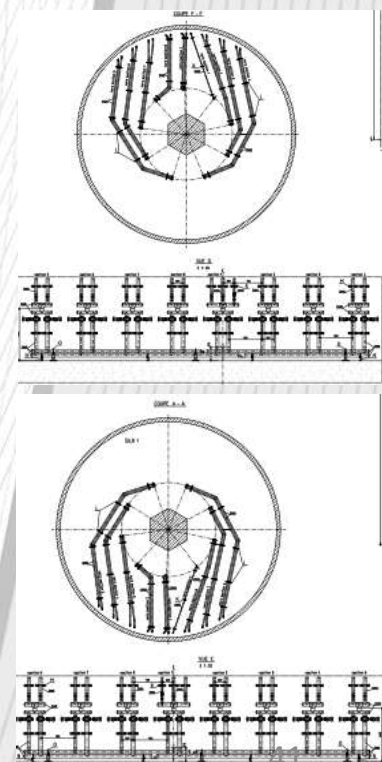
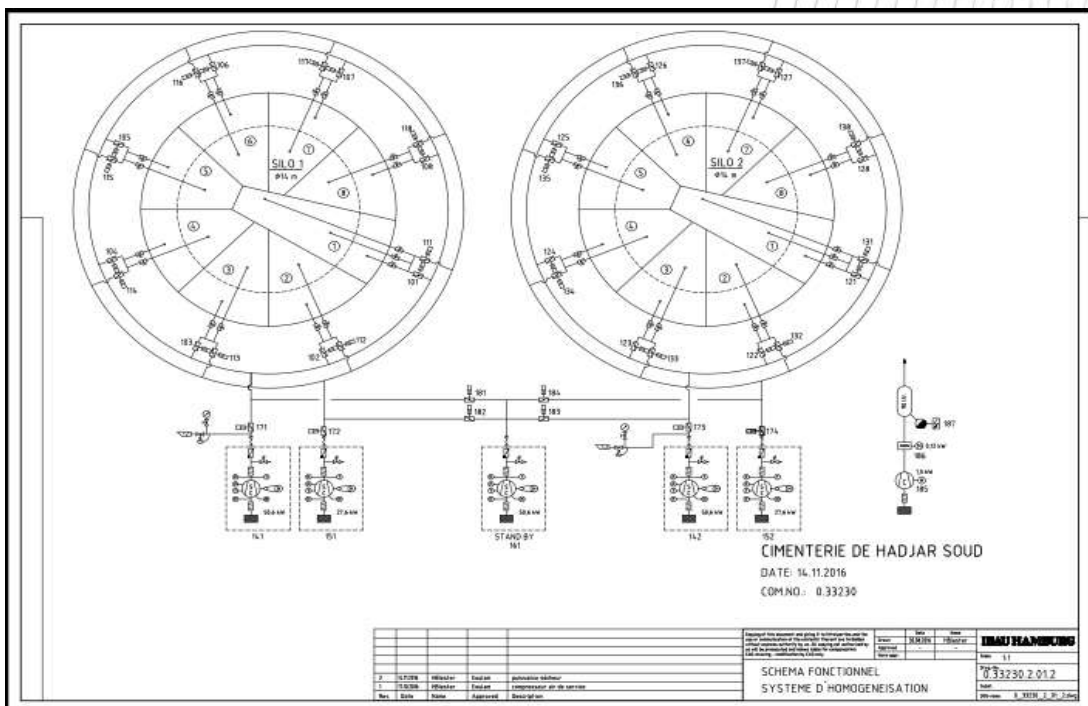
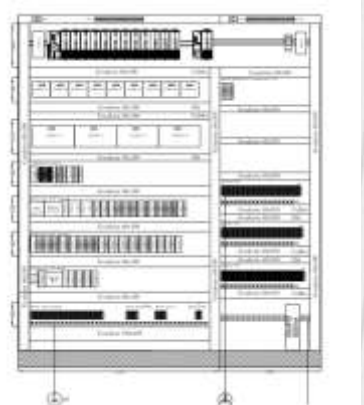
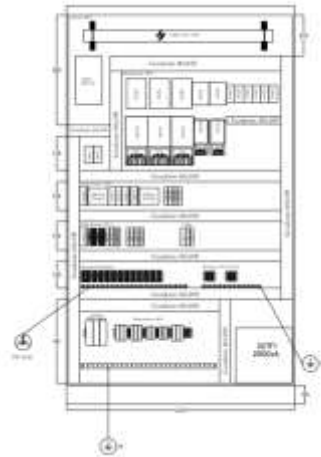
Homogenization of line 2 Hadjar Soud

COMMISSIONING
2017

Revamping of electrical and automation equipment's for homogenization system of line 2 Hadjar Soud

As part of this renovation, our supplies and services includes:

- Supply of one LV distribution panels including automation materials
- Supply of one UPS 20kVA/Backup time 120 min
- Set of junction boxes
- Set of power, control and communication cables
- Set of cable trays and accessories
- Set of earthing system materials
- Electrical and Automation engineering's
- Programming
- Commissioning and Start-up

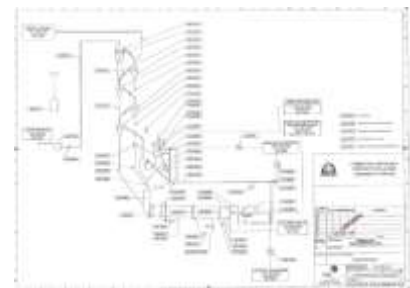
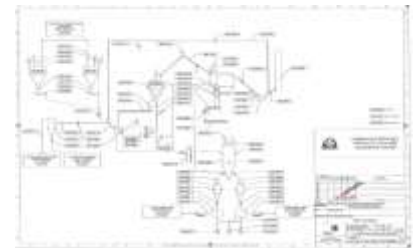
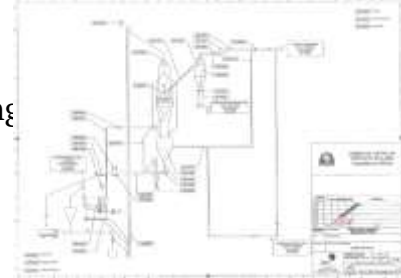
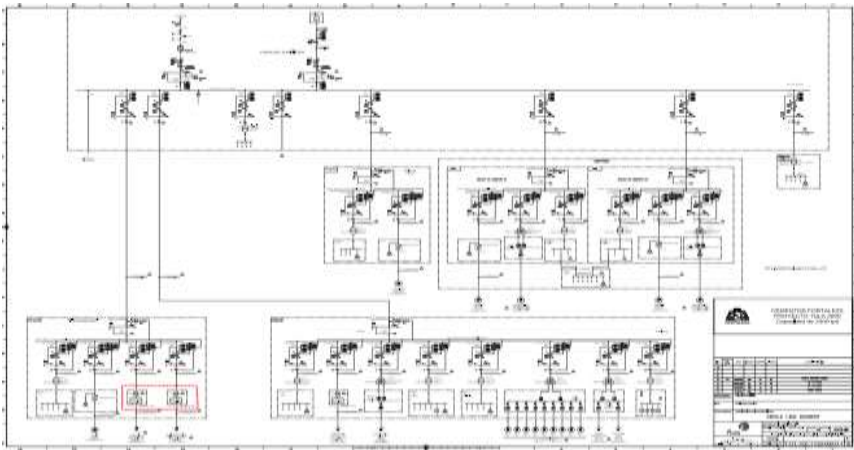


New Cement Factory TULA 2

**COMMISSIONING
 2017**

Our scope of supplies and services, includes:
Services:

- Electrical engineering for construction of control panels
- Electrical and automation detailed engineering for trouble shooting drawing
- Instrumentation engineering's
- Engineering for Ventilations and Air Condition



Supplies:

- 10 ACC panels + 10 Auxiliary Transformers
- 10 Marshaling Digital panels
- 10 Marshaling Analogue panels
- 10 UPS + Batteries + Auxiliary transformers
- 8 feeder boxes for Air Condition and Ventilation units
- 44 Level switches (Normal and ATEX)
- 620 VCS (Normal and ATEX)
- 99 Pressure Switches + 99 Instrumentation boxes (Normal and ATEX) (including manifolds and accessories for process and field connections)
- 92 Temperature sensors + INP101 (PT100; Thermocouples)
- Beri probes and Cleaning boxes (Normal and ATEX)
- Electronic ears
- CATU security materials
- Spare parts
- Packing and delivery F.O.B



MPD panel



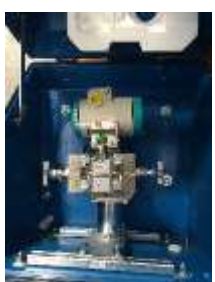
MPA panel



ACC panel



Beri/Cleaning Box



Pressure/DP Box

Control Commande system of Hamma Bouziane *Upgrading of Control Command system and Software's update*

COMMISSIONING
2017

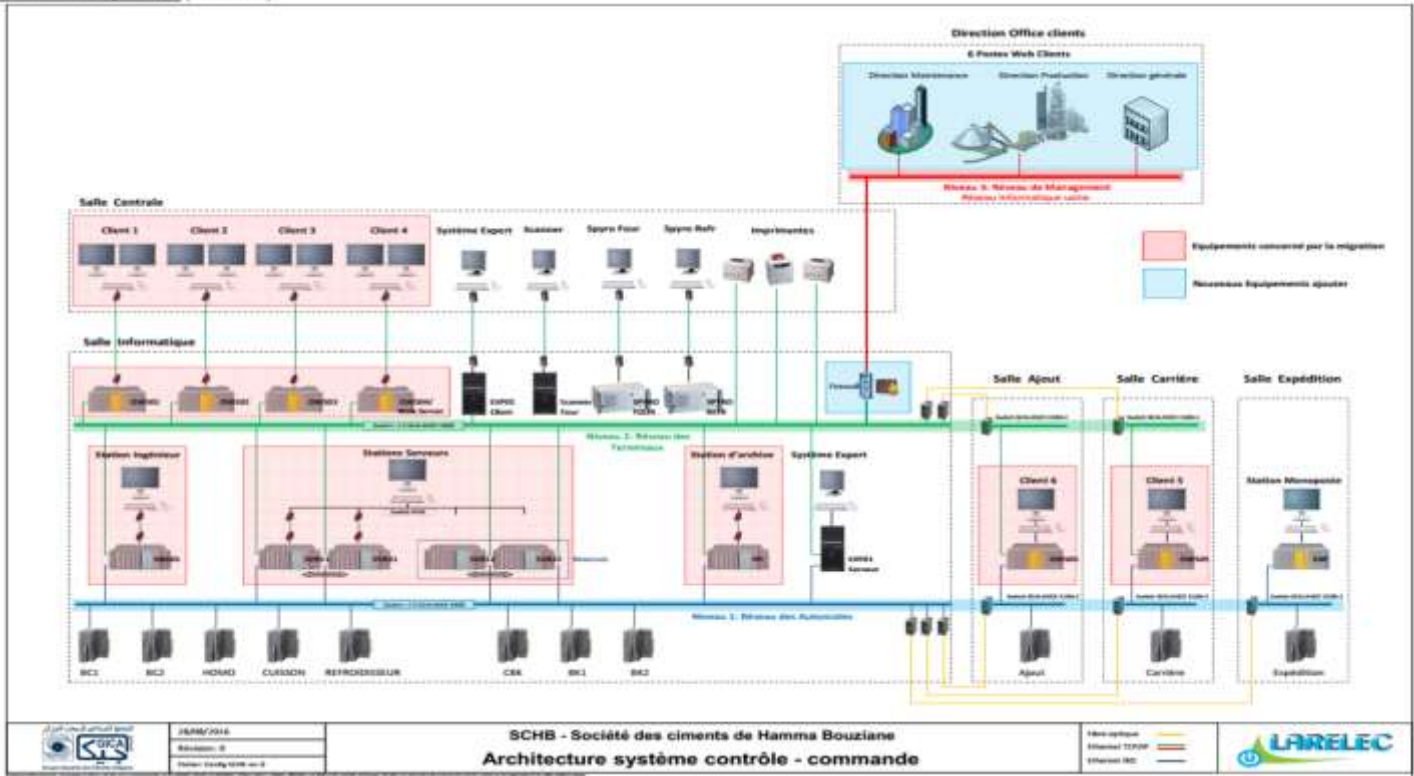
Our scope of supplies and services, includes:

Upgrading the existing control system PCS7 / Cemat from version V6.1 to the latest version of PCS7 / Cemat V8.2.

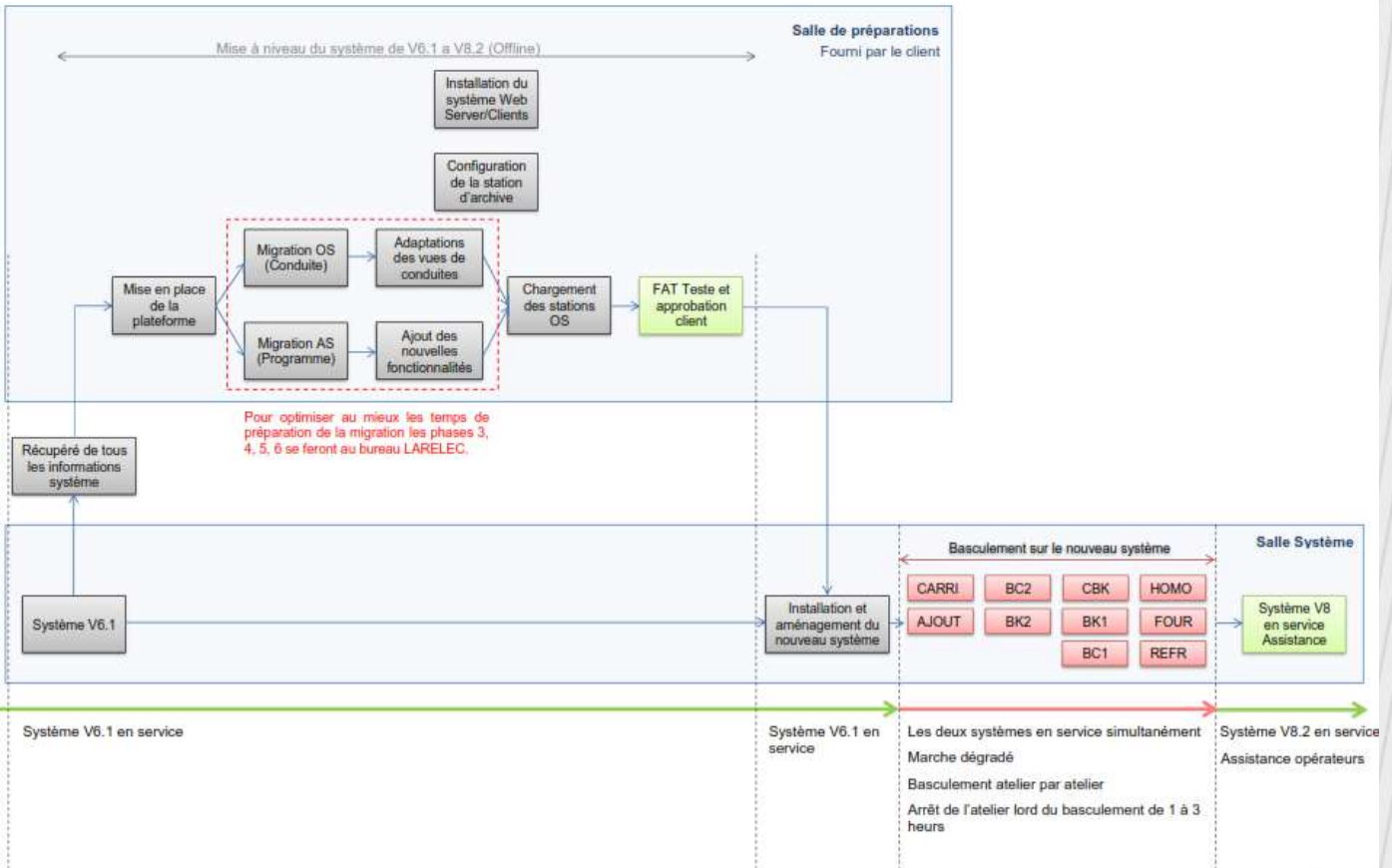
- Replacement of operator stations
- Replacement of servers and engineering stations
- Replacement of web station
- Operator stations, printers and communication equipment's
- Communication cables and accessoires
- Licenses and software's
- Installation of materials above listed
- Rearrangement of the cabinets system
- Installation of software's and licenses of the new control system
- Migration of the Automation programs
- Migration of the supervision synoptics
- Adaptation of synoptics according to the resolution of screens
- Adding the new functionalities of Cemat V8.2 and optimization of programs
- **Workshops:**
 - ✓ Quarry – 381 equipment's
 - ✓ Mixing – 147 equipment's
 - ✓ Raw Mill 1 – 548 equipment's
 - ✓ Raw Mill 2 – 308 equipment's
 - ✓ Homogenization – 694 equipment's
 - ✓ Kiln – 398 equipment's
 - ✓ Cooler – 993 equipment's
 - ✓ Common Mills – 534 equipment's
 - ✓ Cement Mill 1 – 348 equipment's
 - ✓ Cement Mill 2 – 308 equipment's
- Supply and installation of antivirus software's
- Adding new 6 client stations for management follow-up
- FAT of the new automation platform, programs and supervision with client
- Migration and commissioning in cooperation with client automation and technical staff
- Supply of spare parts
- Packing and delivery F.O.B
- Trainings

Control Commande system of Hamma Bouziane Upgrading of Control Command system and Software's update

Architecture système : (Annexe 4)



6.7. Diagramme mode opératoire : (Annexe 7)



Upgrading of clinker cooler

Our scope of supplies and services, includes:

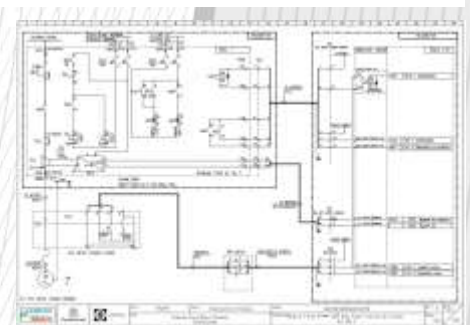
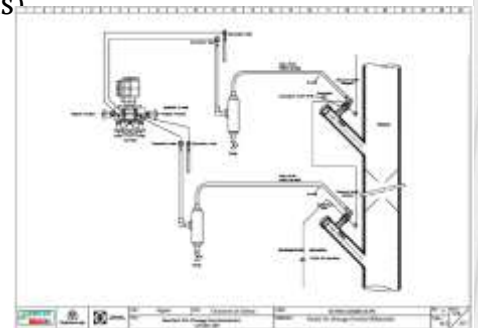
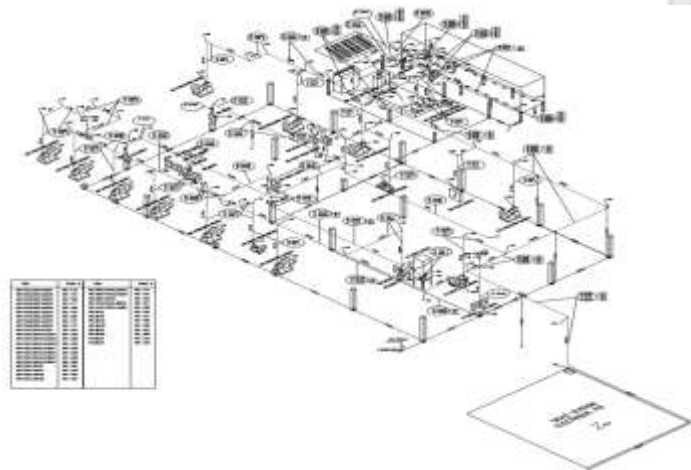
Upgrading of electrical and automation system for clinker cooler.

Services:

- Electrical engineering for construction of LV distribution panels (LVDB/MCC)
- Electrical engineering for construction of control panels
- Electrical and automation detailed engineering for trouble shooting drawings
- Instrumentations engineering's
- Cable trays routing engineering
- Engineering for Ventilations and Air Condition
- Installation and Commissioning

Supplies:

- 1 MV cell (extension of existing MV cells)
 - 1 LVDB/MCC panel
 - 1 Variable speed drive panel
 - 1 Level 2 panel including automation materials
 - 1 ACC/Marshaling Digital/Analogue panel
 - 1 Auxiliary transformer
 - 10 VCS boxes + set of emergency stop
 - 22 Pressure Switches
- (including manifolds and accessories for process and field connections)
- Temperature sensors (PT100; Thermocouples)
 - 1 Camera cooler
 - 1 Air condition unit
 - Set of local junction boxes
 - Set of power, control and communication cables
 - Set of cable trays and accessories
 - Spare parts
 - Packing and delivery F.O.B



Cement factory of Hadjar Soud – Primary Crusher 1000t/h Algerie- 2018

COMMISSIONING
IN 2020

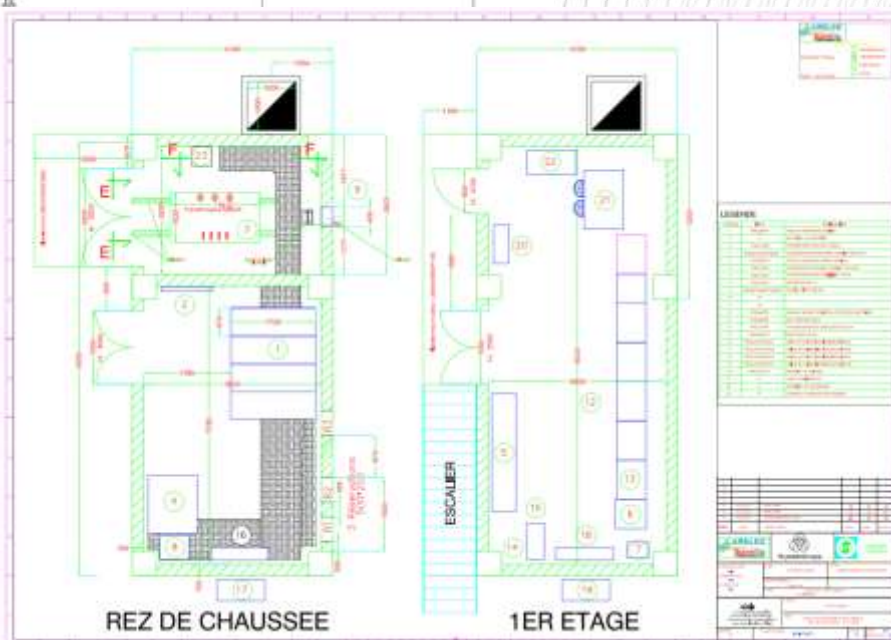
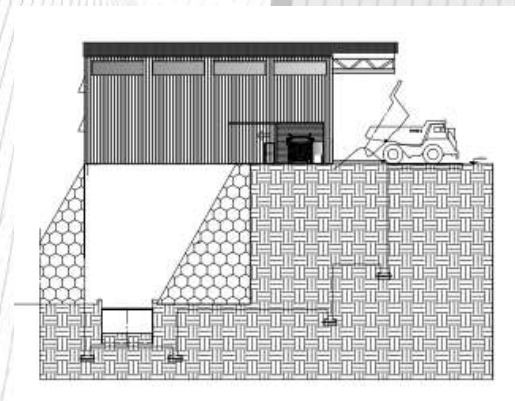
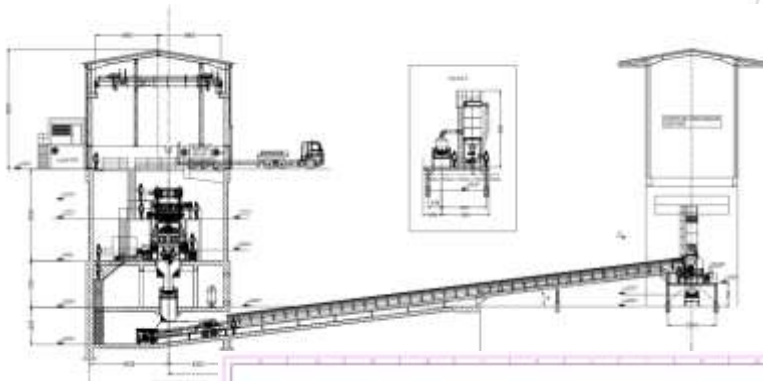
Our scope of supplies and services, includes :

Services:

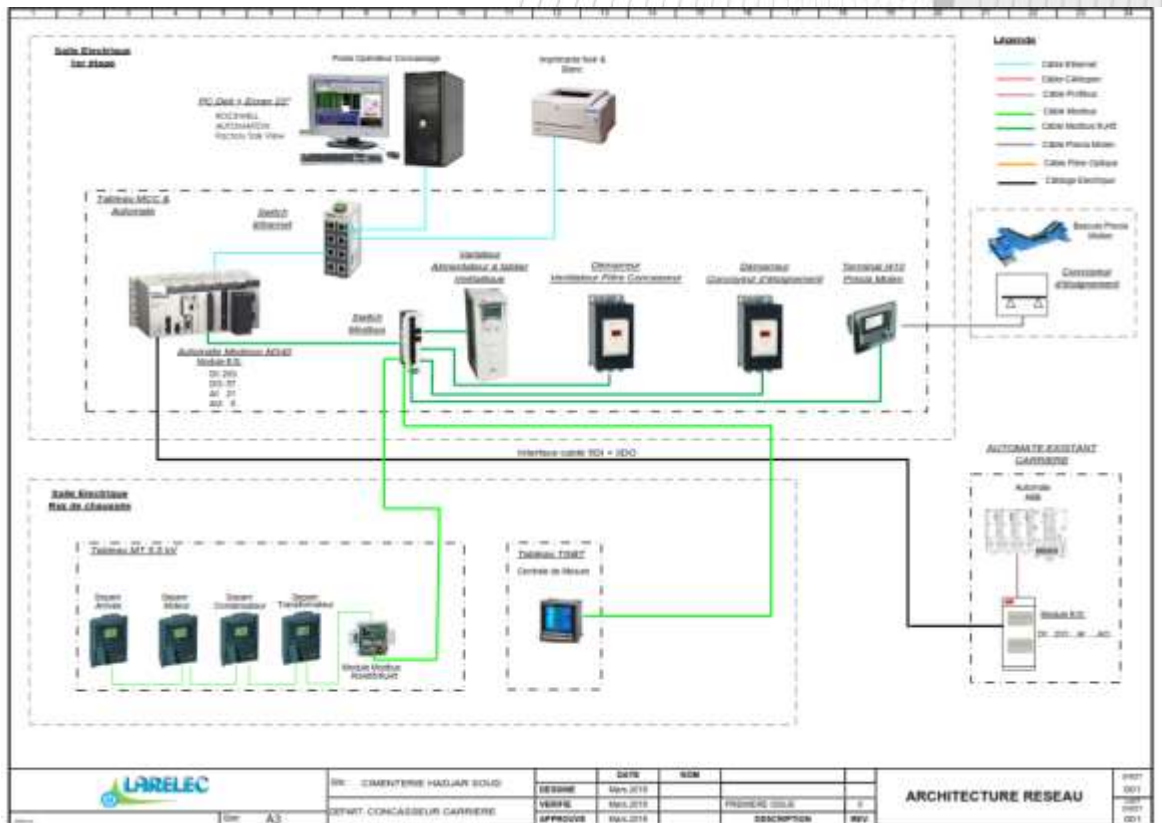
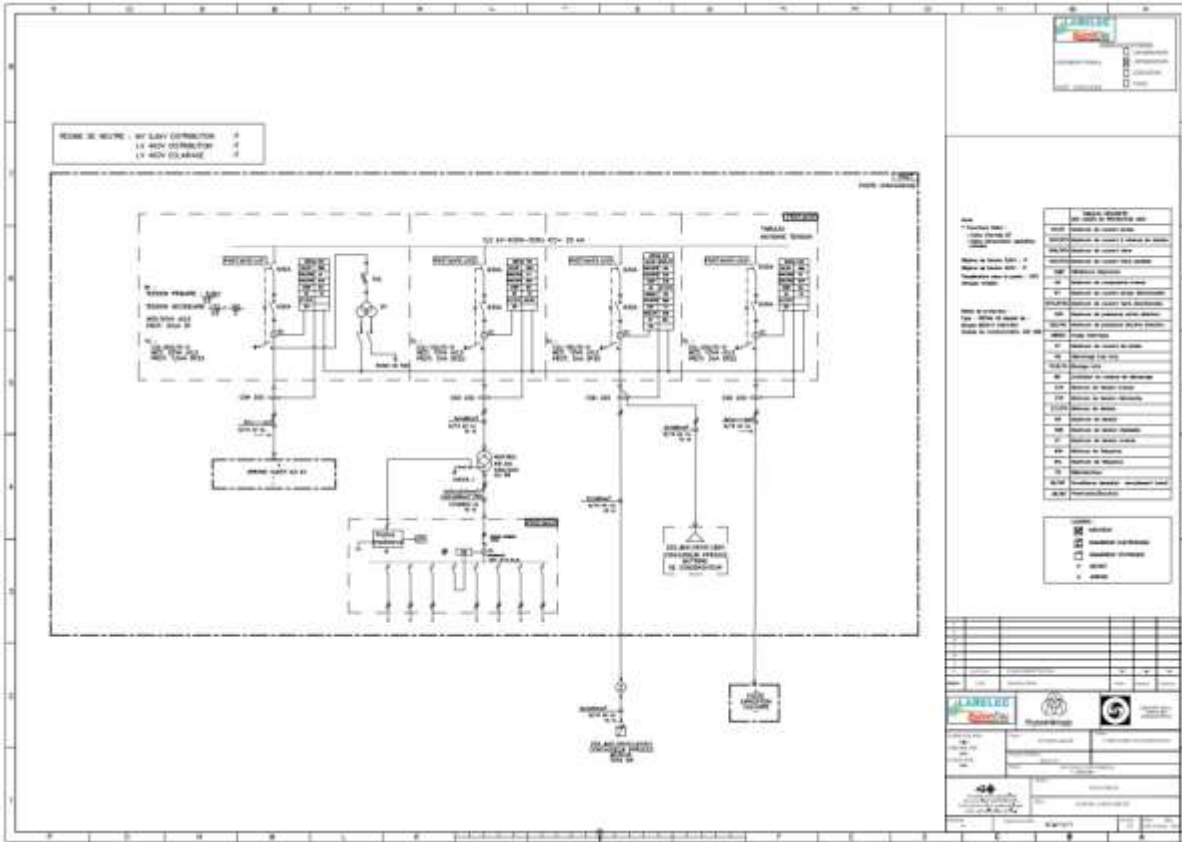
- Electrical engineering for distribution panels (LVDB, MCC,ACC/PLC)
- Electrical engineering (Trouble shooting , cables list and cables calculations, I/O list...etc.)
- Civil guide drawings,
- Automations engineering, Functional Analysis and Programming,
- Instrumentations, Cable routings, Ventilation and Air condition engineering's,

Supplies:

- 4 cells MV
- 1 panel MCC type withdrawable
- 1 panel MCC type fixe (including VSD and Soft Starter)
- 1 panel level 2, including automation materials (, Network materials)
- 1 panel with auxiliary supplies with PLC Digital and Analogue cards
- 1 auxiliary transformer
- 14 box type VCS + 1 lot of Emergency Stop local boxes
- 1 level sensor
- 2 industrial air condition units
- 1 lot of local boxes and local junction boxes
- 1 lot of power, control, instrumentation and communication cables
- 1 lot of cable trays and accessories,
- 1 lot of spar parts
- Packing and Delivery FOB , Marseille



Cement factory of Hadjar Soud – Primary Crusher 1000t/h Algerie- 2018



Onigbolo Cement Factory SCB Lafarge, Supply of ABB Motor + Variable Speed drive 315 kW for ID Fan

COMMISSIONNING IN 2018

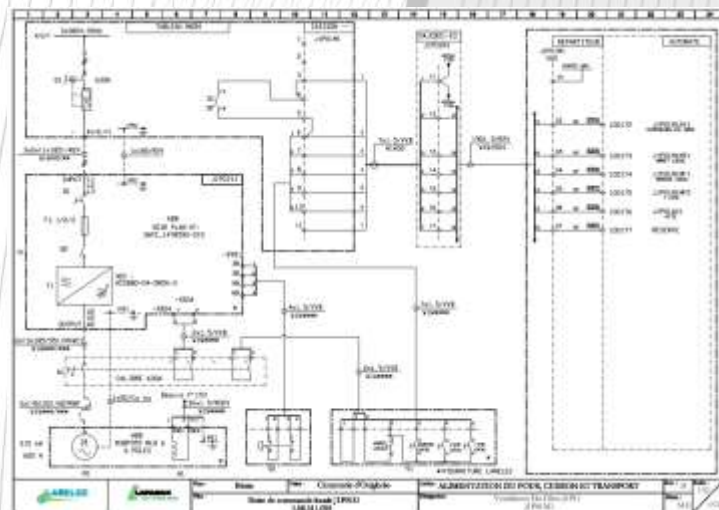
Our supplies includes:

Services:

- Engineering for construction of panel
- Electrical engineering's (trouble shooting drawings, Cables List, Calculation cables by Caneco, I/O List...etc.)
- Automation programming,
- Supervision of installation,
- Commissioning and training

Fournitures:

- 1 panel variable speed drive ACS 880
- 1 squirrel cage motor 315 kW
- 1 lot of instrumentation sensors and convertors
- 1 lot local control and junction boxes
- Packing and Delivery FCA Rouen



Cement Factory – SCB Lafarge

Supply of LV Panels and Variable Speed Drives for Cement Mill - 2018

Scope of supply:

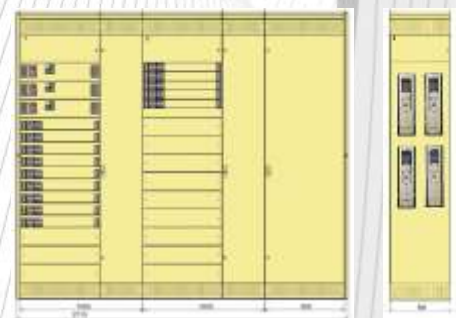
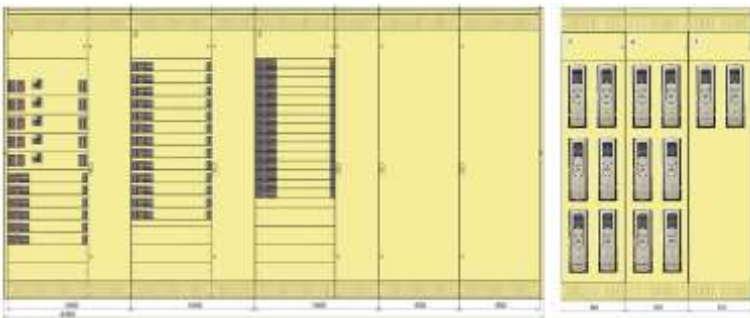
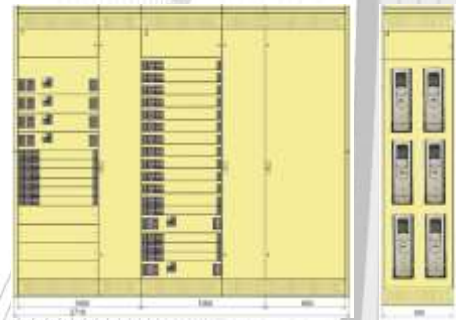
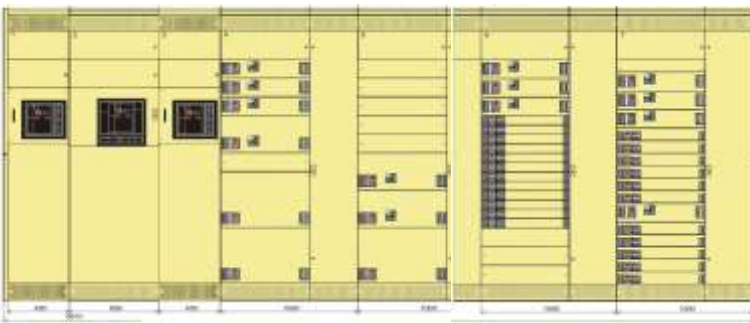
Services:

- Electrical engineering for panel constructions
- Basic engineering drawings (SLD, Typical, Cables and I/O listsetc.)
- Supervision of installation and commissioning

Supplies :

- 1 LVDB panel including withdrawable feeders (7 columns)
- 3 panel MCC including withdrawable motor starters and feeders (10 columns)
- 3 panels including variable speed drives (25 VSD ACS880)
- Packing and Delivery FCA Rouen

COMMISSIONING IN
2019/2020



**CEMENT PRODUCTION LINE
RENOVATION OF MEDIUM VOLTAGE PANELS**

**COMMISSIONING
2020**

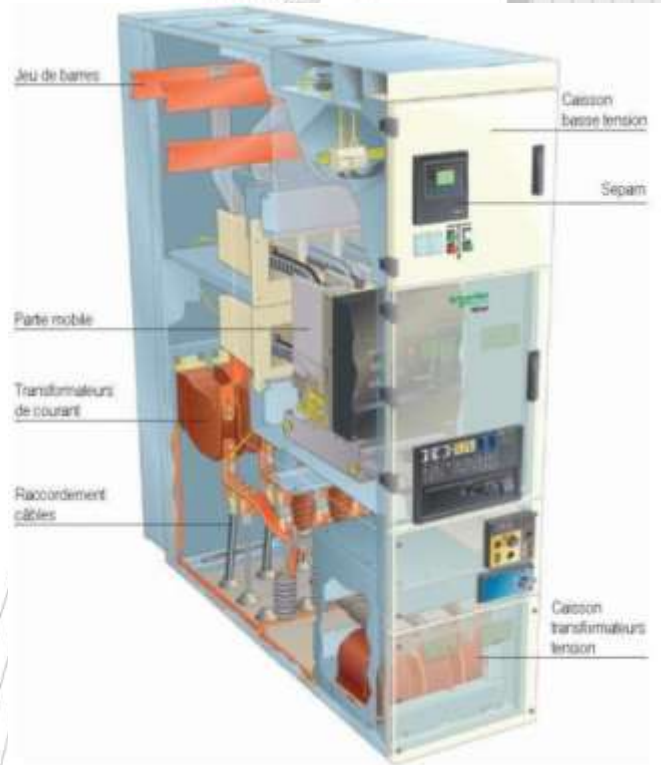
Our supplies includes:

Services:

- Engineering for replacing of MV cell in main station P0
- Engineering for replacing of MV cell in electrical stations
P 1.2 ; P 4.1 ; P 4.2 ; P5 ; P 7.1 ; P 7.2 ; P 4.3 ; P 1.1 ; P2 ; P3 ; P6 ; P9 ; P10
- Engineering drawings(SLD, Typical and Trouble shooting, Cables and Profibus communicationetc.)
- Dismantling of existing equipment's,
- Installation and modification of main incoming busbar from main transformers
- Programming and commissioning of equipment's
- Training

Supplies of switch gears MCSet / 50kA :

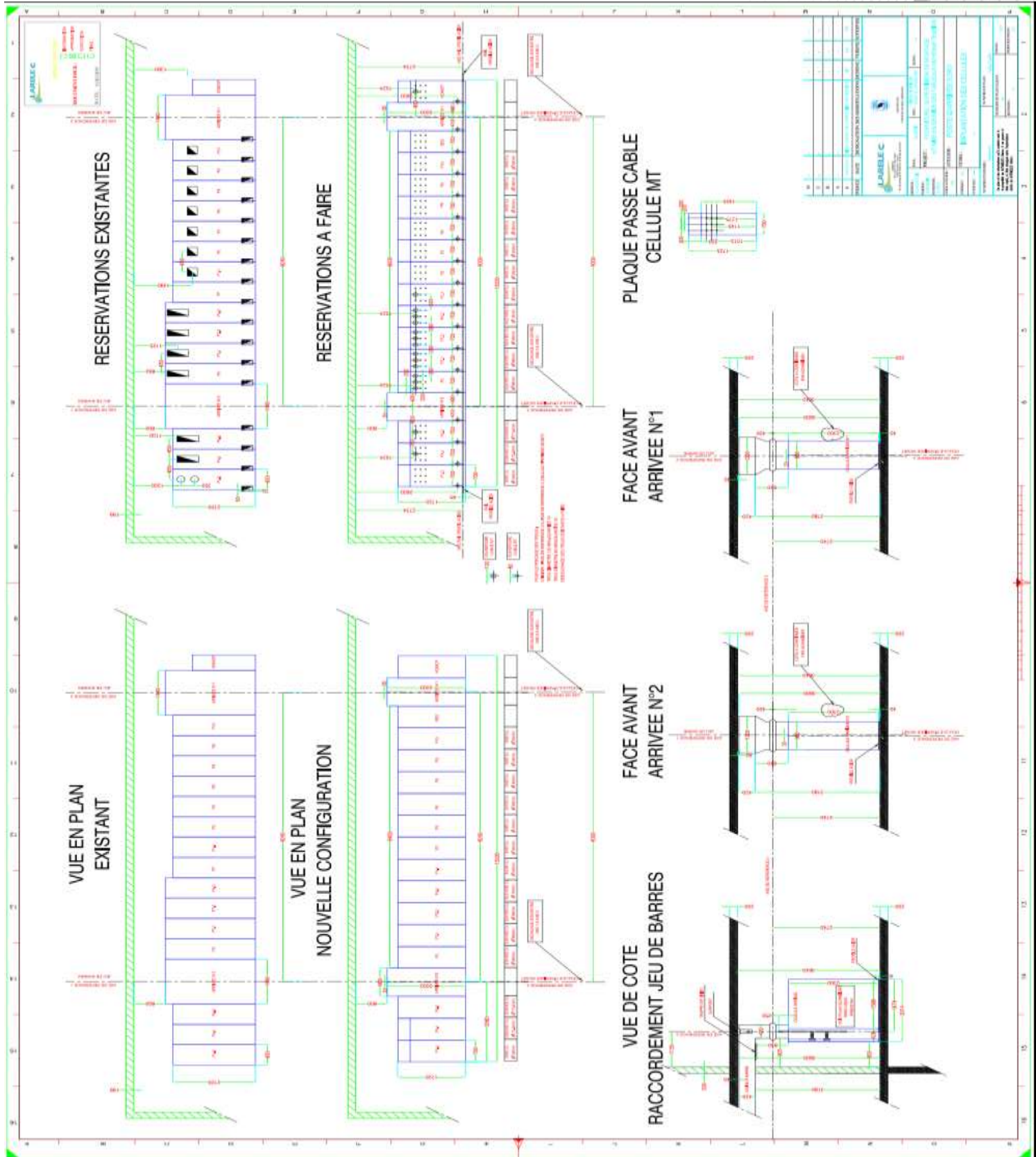
- 2 Main MV incoming cells for electrical station P0
- 2 main busbars 4000 A
- 16 MV distribution cells for main station P0
- 3 MV distribution panels for P1.1
- 2 MV distribution panels for P1.2
- 2 MV distribution panels for P2
- 2 MV distribution panels for P3
- 4 MV distribution panels for P4
- 4 MV distribution panels for P4.2
- 6 MV distribution panels for P5
- 3 MV distribution panels for P6
- 4 MV distribution panels for P7.1
- 4 MV distribution panels for P7.2
- 2 MV distribution panels for P8
- 2 MV distribution panels for P10
- 14 Battery chargers 110V
- 14 Wall Mounted Life Saving Kit
- Communication Profibus modules and Networks
- Spare parts for commissioning and 2 years operation
- Packing and delivery FOB



SEG-MV Cells 1/2

CEMENT PRODUCTION LINE
REPLACING OF MEDIUM VOLTAGE PANELS

Engineering for installation of MV cells in the main station P0



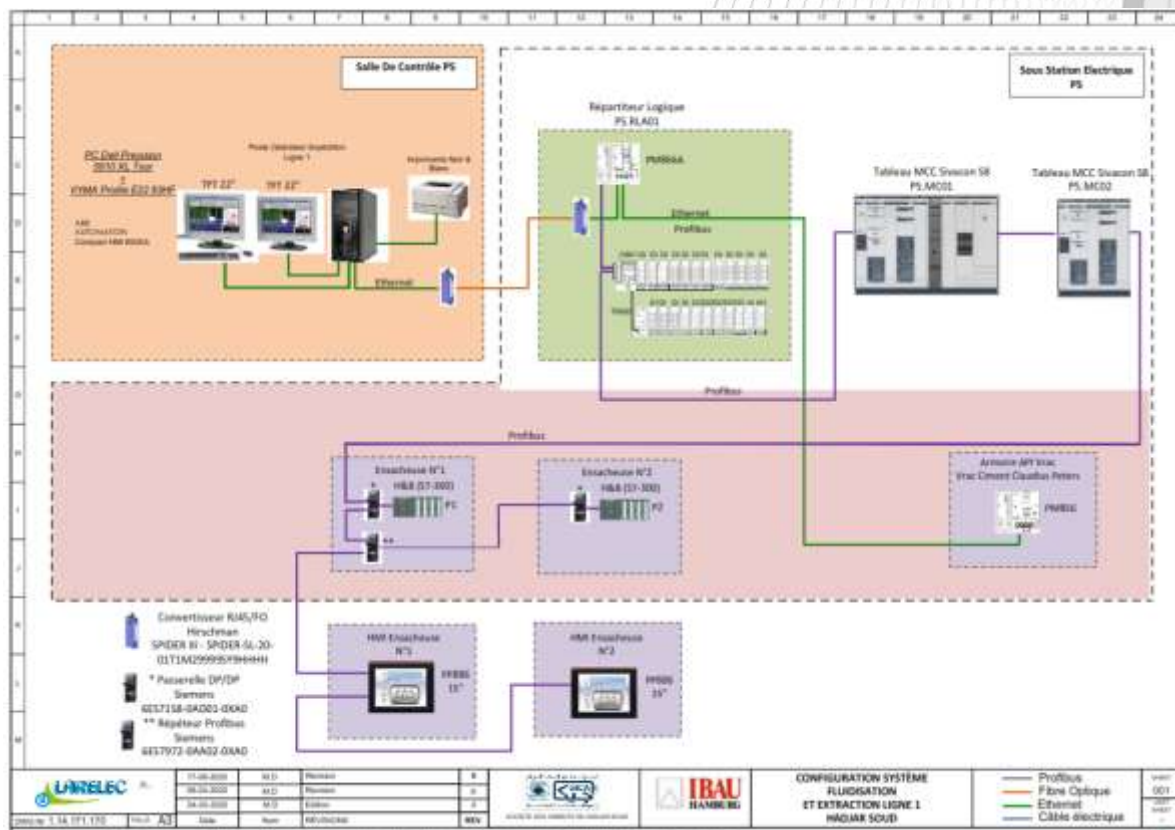
IBAU Germany - Algeria Hadjar Soud Cement Plant - 2020

Engineering, Supply, Erection Supervision and Commissioning of a Fluidization System for Cement silos, Extraction and Cement Transport from Packing plant bag Circuits Line 1 & Line 2 - Hadjar Soud Plant

**COMMISSIONING
2021**

As part of this modernization, our services include:

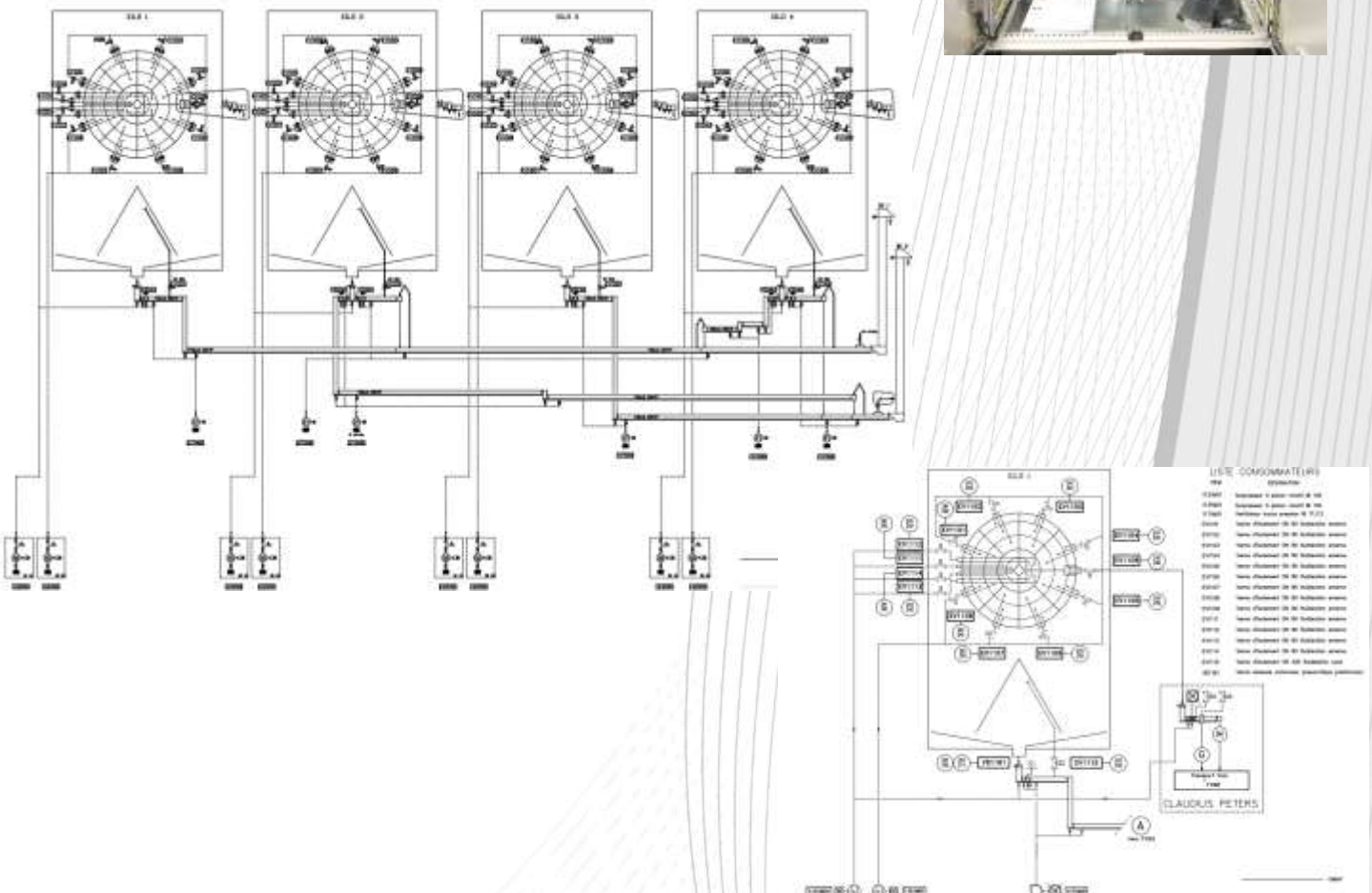
- Supply of two Low Voltage Switchboards SIVACON
- Supply of two Auxilliary Control Center/marshalling panel equipped with PM866 PLCs and ABB S800 I/O system
- Supply of two ABB control system
- Supply of four bagging control boxes equipped with PP886 PLC
- Supply of one communication network box in control room
- Supply of two UPS 10kVA/Backup 30 min
- Set of Junction boxes
- Set of local control boxes
- Set of Cables
- Set of Cable trays
- Earthing
- Electrotechnical studies
- Programming
- Erection supervision, Test and commissioning



IBAU Allemagne - Algérie Usine de Hadjar Soud- 2020

Engineering, Supply, Erection Supervision and Commissioning of a Fluidization System for Cement silos, Extraction and Cement Transport from Packing plant bag Circuits Line 1 & Line 2 - Hadjar Soud Plant

COMMISSIONING
2021



IBAU Germany - Algeria Benisaf Cement Plant - 2020

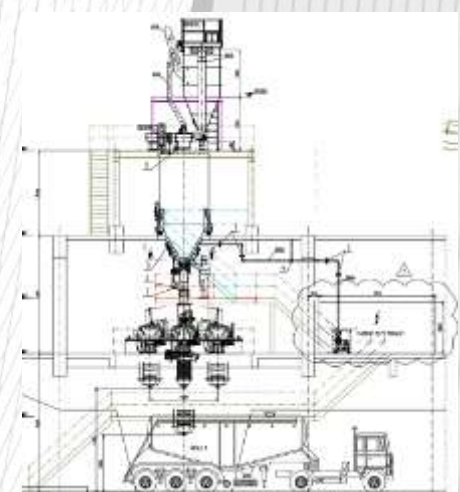
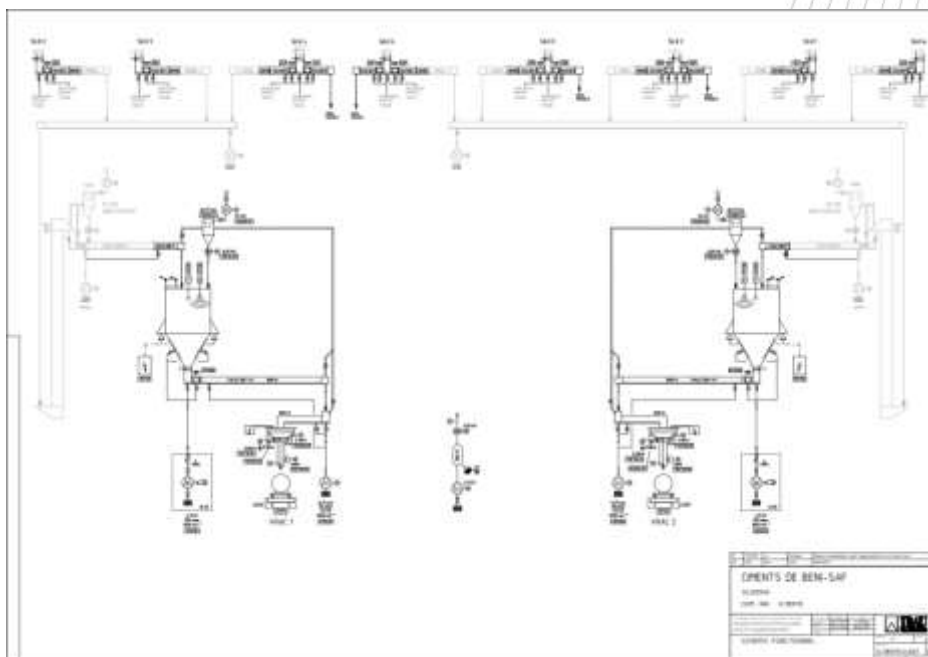
Engineering, supply, Erection Supervision and commissioning an Automatic Bulk Truck Loading System

Packing plant - Benisaf Cement plant

**MISE EN SERICE
2021**

As part of this modernization, our services include:

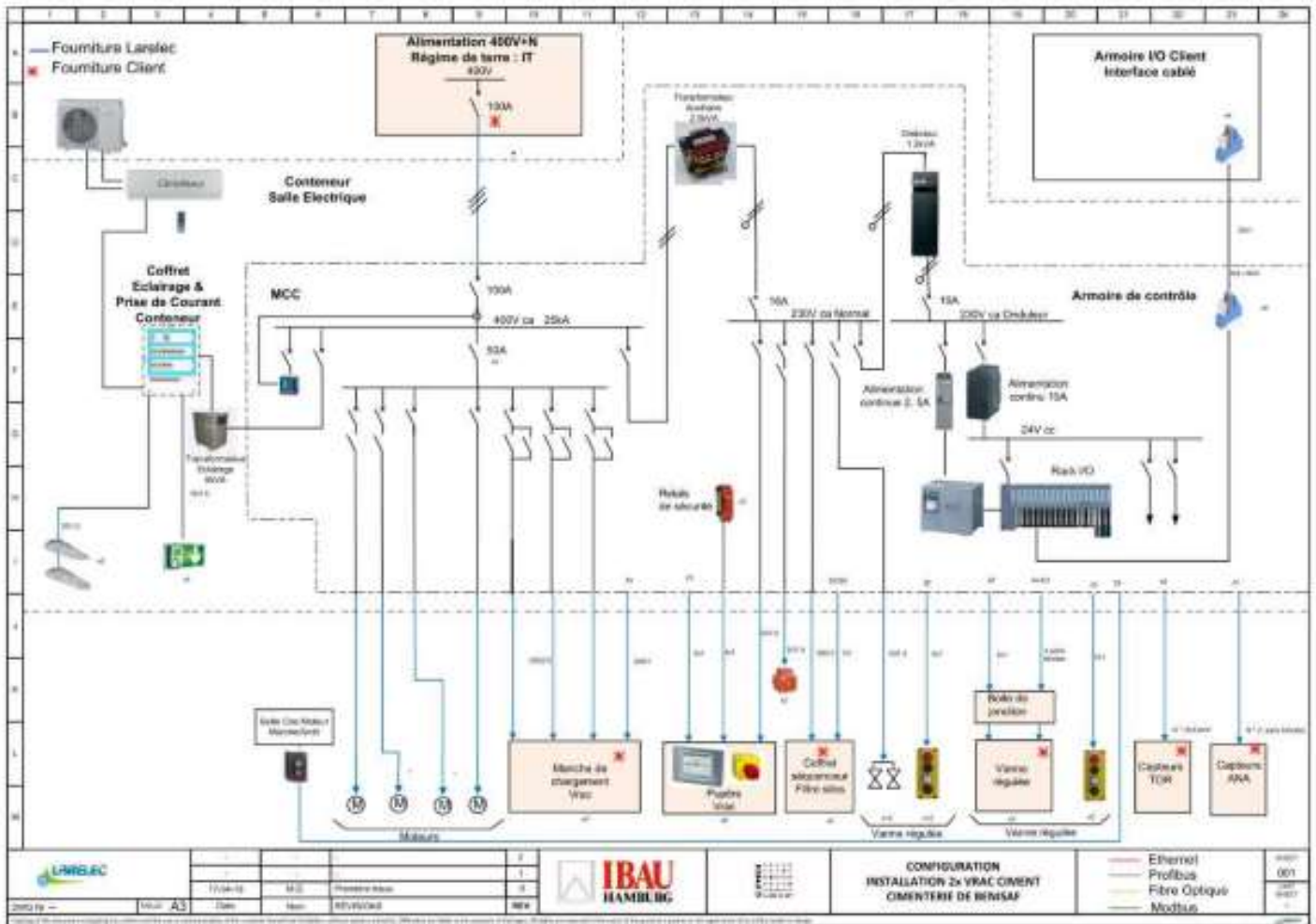
- Supply of a Low Voltage Switchboards SIVACON
- Supply of an Auxilliary Control Center/marshalling panel equipped with S7-1500 PLC and Siemens ET200SP I/O system
- Supply of control system
- Supply of two bulk loading boxes equipped with TP1500 HMI and WINOXL-MU Weighing indicators
- Supply of a prefabricated electrical substation
- Supply of two UPS 10kVA/Backup 30 min
- Set of Junction boxes
- Set of local control boxes
- Set of Cables
- Set of Cable trays
- Earthing
- Electrotechnical studies
- Automation programming
- Erection supervision, Test and commissioning



IBAU Germany - Algeria Benisaf Cement Plant - 2020

Engineering, supply, Erection Supervision and commissioning an Automatic Bulk Truck Loading System
Packing plant - Benisaf Cement plant

COMMISSIONING
2021



Oyak Cement Plant Kribiclay Cameroun



As part of this project, our services include:

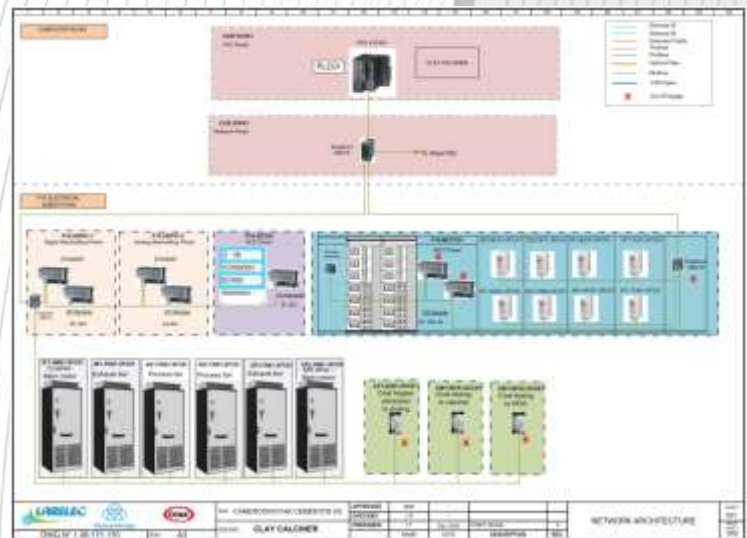
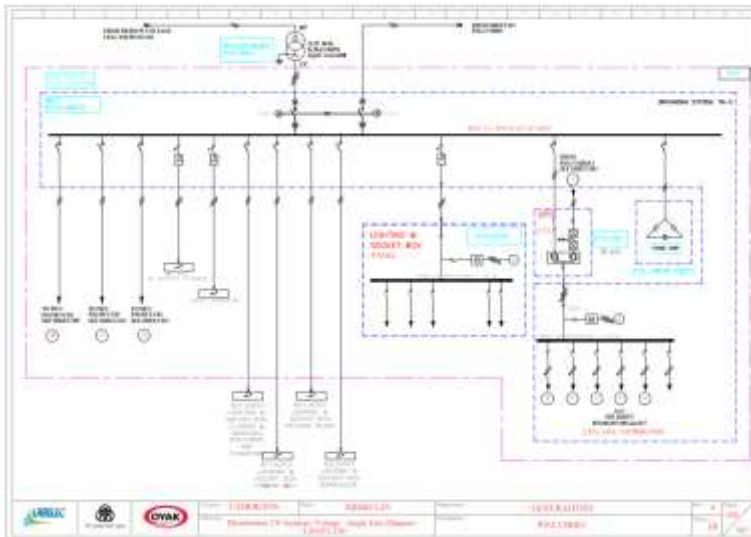
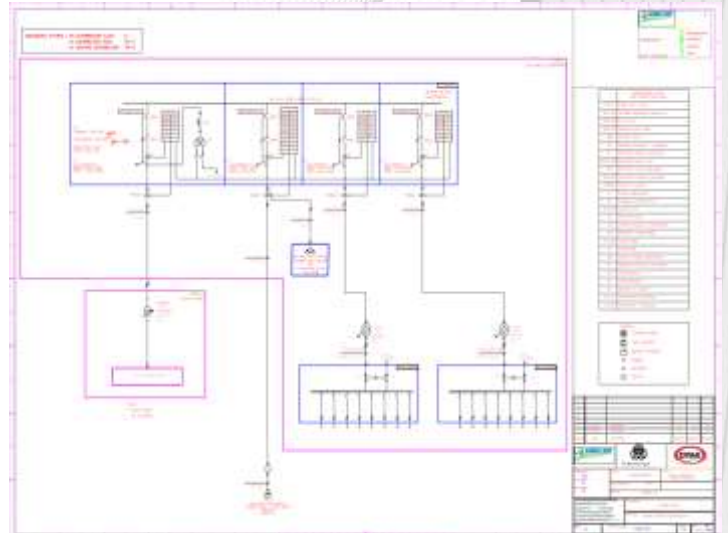
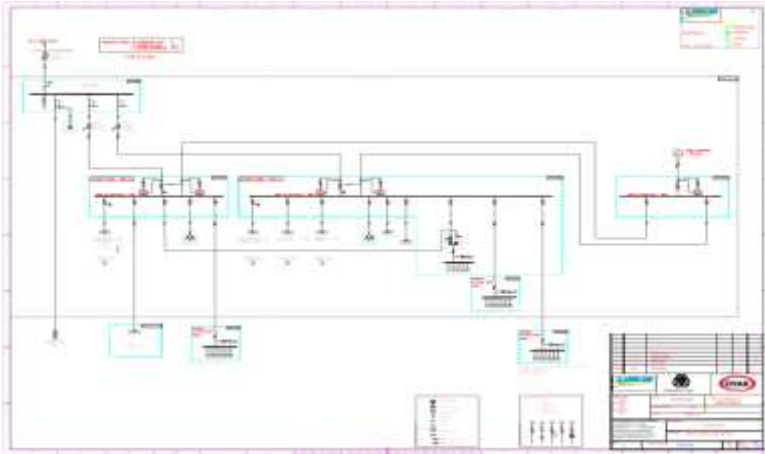
- Basic Electrical Engineering:
 - Drawings list
 - Consumers list
 - ML/LV Single Line Diagram
 - Auxiliary distribution single line diagram
 - Technical specifications for all electrical and automation equipmen
 - Typical Diagram for MV / LV / Control Command equipment
 - Erection Standards

- Detail electrical engineering:
 - MV Network selectivity studies
 - MV/LV Power Balance
 - Caneco MV/LV calculation note
 - Lighting and Earthing calculation note
 - Earthing, civil works and foundation earth.
 - Fire detection System
 - Instrumentation, Cable trays, Ventilation and Air conditioning
 - Equipment location in substations
 - Inside and outside lighting location
 - Electrical diagrams: troubleshooting diagrams
 - List and calculation of cable sections
 - List of PLC inputs/outputs
 - Construction diagram of control / command and auxiliary distribution cabinets

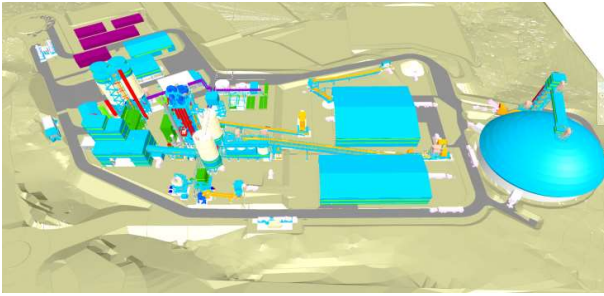
- Technical support in site during installation and commissioning

Oyak Cement Plant Kribiclay Cameroun

**COMMISSIONING
EXPECTED IN
2021-2022**



Cimenterie de Oyak Kribiclay Cameroun



COMMISSIONING
2022

As part of this project, our services include:

- Supply of the following equipment's:
 - B4 : Battery charger 110 V DC for MV cells
 - C1: MCC panel, TGBT panels

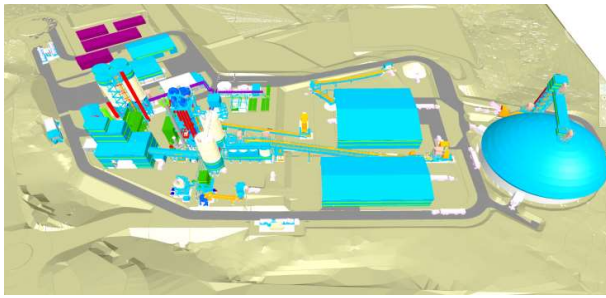


- C1 : Control commande panels, PLC panels, Auxiliary distribution panels



- C3: UPS and Distribution transformers
- C4: LV Capacitor banks
- E1: Earthing networks
- E2: Lightning systems
- F1: Ventilation and Air condition systems
- F2: False floor and Accessories
- F3: Fire detection

Cimenterie de Oyak Kribiclay Cameroun



COMMISSIONING
2022

As part of this project, our services include:

- F4: Security équipements
- G1: Lighting équipements
- G1: Lighting panels,



- G2: Lighting roads
- G3: Power sockets standard et ATEX
- H6: MT Capacitor Banks
- J1: Digital Instrumentation sensors
- J2: Analog Instrumentation sensors & Auxiliaires



- L1: Cables & Accessoires for cables
- L2: Cable trays and Accessoires



- T: Packing and Delivery FOB

Cimenterie de Benisaf Algérie- 2021

Rénovation Atelier d'Expédition

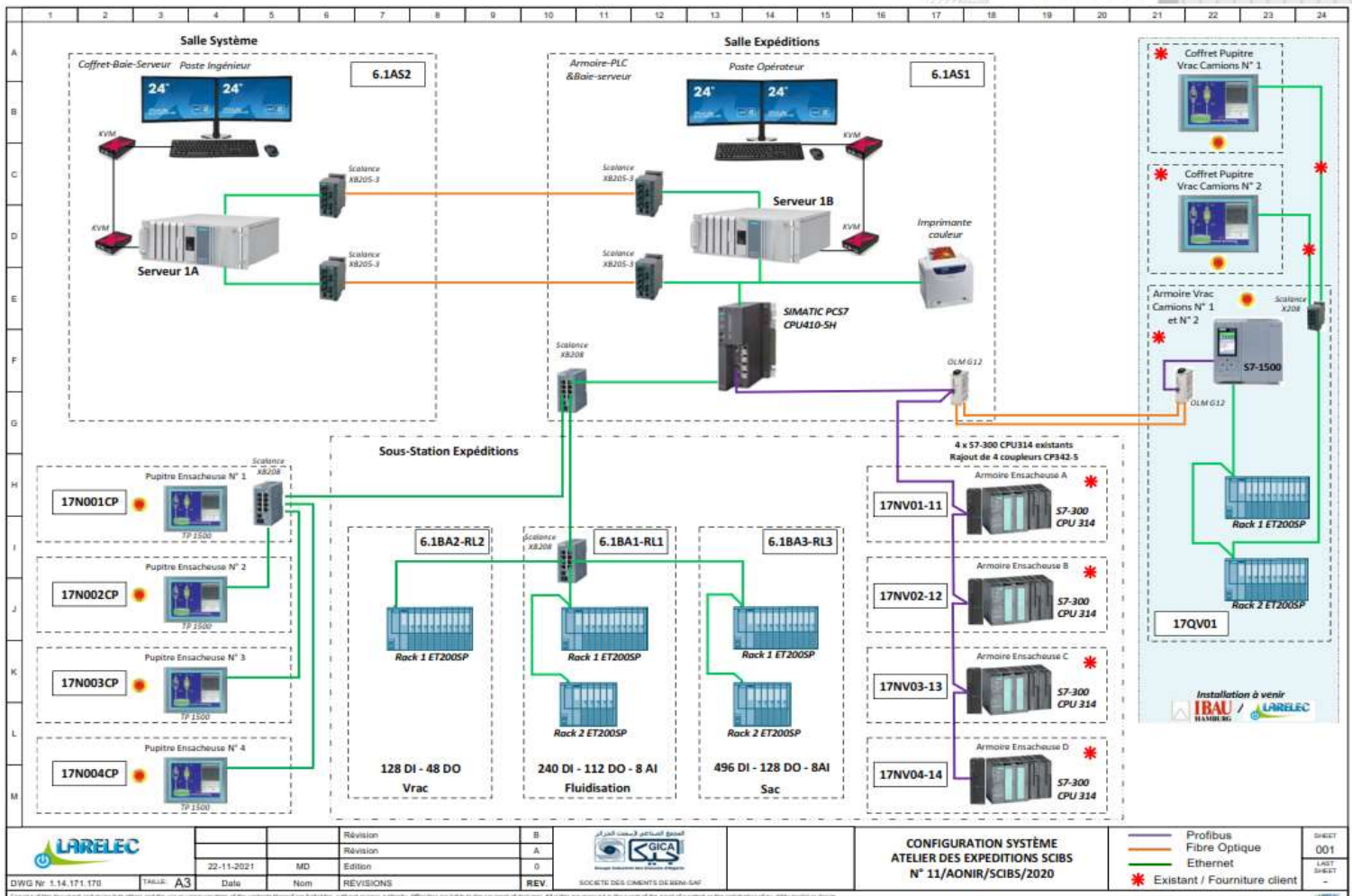
COMMISSIONING
2022

As part of this modernization, our services include the supply, assembly and commissioning of equipment necessary for the electrical renovation and automation of the dispatch workshop of the Béni-Saf cement plant (S.C.I. B.S.)

Our services includes :

Complete engineering necessary for upgrading of this workshop :

- 5 packing lines
- 2 bulk loading lines.



	Révision B Révision A Edition 0			CONFIGURATION SYSTÈME ATELIER DES EXPÉDITIONS SCIBS N° 11/AONIR/SCIBS/2020	— Profibus — Fibre Optique — Ethernet * Existant / Fourniture client	SHEET 001
	DWG N° 5.14.171.170 THAIL: A3 Date: 22-11-2021 Nom: MD REVISIONS: REV	SOCIÉTÉ DES CEMENTS DE BENI-SAF				LAST SHEET: -

Upgrading of Packing

As part of this modernization, our services include also :

Supply of the following materials listed below-dessous :

- Complete automation system including:
- Two network panels, one in the central control room and one in packing area
- Installation of redundant servers
- A server in the system room also used as an engineer station
- A server in the packing room also used as an operator station,
- Screens 24", keyboard and mouse connected trough KVM extenders
- One color printer for Packing operator room
- I/O equipments for level 1 ProfiBus, Profinet,
- PLC S7-400 and communication module CPU 41-5H
- Control desk , Interfaces with packing machines Haver&Bocker
- Auxiliary distribution boards, UPS and auxiliary transformers
- Analog and digital sensors
- Power, control cables and accessories
- Cables trays and accessories for earthing
- Spare parts

Packing and delivery F.O.B

Installation supervision , installation and commissioning

Training Cemat



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