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List OF

Cement Plant Projects

2022 - on going. SCBL, Benin

New cement grinding station in order to increase the production to 740'000 tpy: Plant audit, basic engineering, tendering, design approval, project management, erection and commissioning supervision.

2019 - on going . Les Ciments du Sahel, **Senegal**

- → Third cement line of 3 mio. tpy in order to increase the total production of the plant to 6 mio. tpy: Multiple packages project. Full Project Management Consultant responsibility, including engineering review, management of all contracts, management of project execution, supervision and commissioning.
- → **Power Plant 60 MW**: Full Project Management Consultant responsibility, including engineering review, i.e. feasibility study, engineering, call for tender, contract, erection and commissioning supervision.

2019 - on going. Tekcim, Morocco

Greenfield: Cement plant 1.4 mio. tpy: EPC project. Design engineering approval, main equipment inspections, project management assistance, erection and commissioning supervision.

2018. CIMAF, Guinea Conakry

Second line grinding station in order to increase the production by 1 mio. tpy: Design review and project monitoring on behalf of the lenders (banks).

2016 - 2020. Société des Ciments de Sigus, Algeria

Greenfield: Cement plant 2.5 mio. tpy: EPC project. Design engineering approval, erection and commissioning supervision.

2016 - 2021. Société Saoura Ciment, Algeria

Greenfield: Cement plant 1.3 mio. tpy: EPC project. Design engineering approval, erection, commissioning and plant personel formation supervision.

2016 - 2018. Moncement Building Materials LLC (MBM), Mongolia

Grinding station 120 t/h: EPC project. Project Management Consultant from the design and engineering approval up to the commissioning.

2015 - on hold. Cevital Minerals, Algeria

Greenfield: Cement plant 5 mio. tpy: Multi-package project. Full engineering responsibility, contract management, erection and commissioning supervision.

2015 - on going. International Cement Company (ICC), Nigeria

- → **Greenfield: Cement plant 1.5 mio. tpy**: EPC project. Full engineering responsibility, contract management, erection and commissioning supervision.
- → **Power Plant 44 MW** : Full engineering responsibility, i.e. feasibility study, call for tender, contract, erection and commissioning supervision.

REFERENCES

2015 - on hold. Giant Cement Works Ltd (GCWL), Nigeria

Greenfield: Cement plant 1.3 mio. tpy: EPC project. Full engineering responsibility, contract management, erection and commissioning supervision.

2014 - 2016. Moncement, Mongolia

Greenfield: Cement plant 1'000'000 tpy: Review of the technical and financial EPC contract, compliance with the technical requirements and the erection schedule, monthly supervision of progress, control of the performance tests documents and technical completion report.

2010 - 2016. Tanga Cement, Tanzania

Second cement line in order to increase the production to 1 mio. tpy: Design review and project monitoring on behalf of the lenders (banks) for the TK2 project.

2010 - 2014. La Nouvelle Cimenterie du Bénin, Benin

- → **Greenfield: Cement plant 1.5 mio. tpy**: EPC project. Full engineering responsibility, contract management, erection and commissioning supervision.
- → **Power Supply of 40 MW**: the study of the energy supply to the plant and the camp encompasses the installation of a captive power plant as well as the possibility to connect to the power grid.

2007-2011. Les Ciments du Sahel, **Senegal**

- → Second cement line in order to increase the production to 2 mio. tpy: Multiple packages project. Full engineering responsibility, management of all contracts, management of project execution, supervision and commissioning.
- → **Power Plant 40 MW** : Full engineering responsibility, i.e. feasibility study, engineering, call for tender, contract, erection and commissioning supervision.

2007-2011. Ohorongo Cement, Namibia

Greenfield: Cement plant 1'000'000 tpy: Design review and project implementation monitoring on behalf of the lenders for the construction of a cement plant.

Installation of Equipment

2020. Cemento Chagres, Panama

Grinding station 300'000 tpy: Study and implementation of a 250 t/h dust-free transport between the outlet of the crusher and the feed to the classifier.

2012—2015. Monpolymet, Mongolia

Review of the technical and financial EPC contracts and supervision of work progress for a new grinding unit of 120 tph in the Songino-Khairklian District.

2012 - 2013. Holcim (Philippines) La Union plant, *Philippines*

Design engineering for clinker cooler replacement (2'800 tpd) and erection supervision.

2012 - 2013. Holcim (Philippines) Calaca plant, *Philippines*

Grinding station 375'000 tpy: Design engineering for fly ash installation. Supervision of the revamping.

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Installation of Equipment (continuation)

2011—2012. United Cement Company of Nigeria LTD. (UniCem), Nigeria

Main crusher installation (1'200 tph): Engineering review and erection supervision.

2010 Ciment Vigier (Ciments Vicat), Switzerland

Automatic bulk loading station: Review of civil engineering drawings and construction supervision on site.

2006 - 2007. Les Ciments du Sahel, Senegal

Extension packing plant (2'400 bags/hour): Full engineering responsibility, i.e. feasibility study, engineering, call for tender, contract, erection and commissioning supervision.

2004 - 2006. Les Ciments du Sahel, Senegal

Coal grinding and handling installation (38 tph): Full engineering responsibility, i.e. feasibility study, engineering, call for tender, contract, erection and commissioning supervision.

Feasibility Studies & Call for Tenders

2022. Apaxco, Mexico

Upgrade of existing kiln: Opportunity study to upgrade one kiln to 3'000 tpa.

2018. Les Ciment du Sahel, Senegal

Brownfiled: Cement plant of 2.4 mio. tpy: Call for tender for EPC and multi-package contract.

2018. Libyan Cement Company, Libya

Brownfiled: Cement plant of 1 mio. tpy: Call for tender, writing and negociation of the contract.

2017 - 2018. Libyan Cement Company, Libya

Rehabilitation of existing lines in the Benghazi-Hawari plant: Feasibility study and technical assessment of the actual state. Evaluation of three rehabilitation scenarios with up to 7'200 tpd capacity.

2016. SGTM, *Maroc*

Greenfield : Grinding station and cement dispatch: Comparative profitability study between a 250'000 t/an and 400'000 t/an capacity.

2015. Cevital Minerals, *Algeria*

Greenfield: Cement plant 5 mio. tpy: Comparative feasibility studies of several technical solutions.

2014 - 2015. Giant Cement Works Ltd., Nigeria

Greenfield: Cement plant 2.6 mio. tpy: Feasibility study and raw material exploration in Cross River state.

2014. La Nouvelle Cimenterie du Bénin, **Bénin**

Coal power station 2 x 100 MW: Feasibility study.

2014. Tanga Cement Company Ltd., *Tanzanie*

Grinding station 120 t/h and cement dispatch 700'000 tpy: Étude de faisabilité.

2013. CMS Clinker, Mambong, Malaysia

Cement grinding plant 150 tph and cement dispatch of 1 mio. tpy: Call for tender and supervision of execution.

REFERENCES

2013 - 2014. International Cement Company Ltd., Nigeria

- → **Greenfield: Cement plant 1.5 mio. tpy**: Feasibility study and call for tender in Ogun state.
- → **Power Plant 44 MW**: Feasibility study and call for tender.

2011. Holcim (Spain), Carboneras plant, Spain

Precalciner and clinker cooler (3'300 tpd): Market survey, feasibility study, project management and basic engineering for the replacement of the 3'300 tpd calciner and clinker.

2010. Ebonyi Cement Company, Nigeria

Greenfield: Cement plant 2 mio. tpy: Feasibility Study.

2007 - 2010. La Nouvelle Cimenterie du Bénin, Benin

- → **Cement plant 1.5 mio. tpd**: Feasibility study, basic engineering, tendering, contract negotiation.
- → **Power Plant 30 / 40 MW**: Feasibility study, basic engineering, call for tender, contract negotiation.

2007 - 2010. Omega, South of Europe

Greenfield: Cement plant 2 mio. tpy: Feasibility study and engineering for a green field plant.

2007 - 2010. SGTM, Morocco

Greenfield: Cement plant 1.5 mio. tpy: Feasibility study, basic engineering, call for tender.

2006 - 2007. Les Ciments du Sahel, Senegal

Second cement line in order to increase the production to 2 mio. tpy: Feasibility study, basic engineering, call for tender and contract negotiation.

Studies and Consulting

2020. Cemento Chagres, Panama

Critical study of the design, engineering and construction of the entire 300'000 t/a grinding station built in 2018 by a company from Forida, USA.

2018. LafargeHolcim Côte d'Ivoir, Ivory Coast

Basic engineering and evaluation of the investment cost of a material handling, storage and recovery facility at the LafargeHolcim plant located in the port of Abidjan.

2017. CRH Illigan, Phillippines

Master plan for capacity increase to 8000 t/j of clinker of the cement plant and to 2.7 mio. tpy harbour facilities at its grinding plant.

2013. Kerkoub Group, Mauritania

Design engineering of a grinding terminal project of 80 tph.

2013. Holcim (Philippines) Calaca plant, Philippines

Upgrading and replacement of Clinker Cooler of 2'800 tpd.

2011. Holcim (Guinée), Guinea

Design estimation of a turnkey grinding terminal expansion project, 80 tph.

2009. Obajana Cement, Nigeria

Study for the optimization of cement grinding, 2 x 335 tph.

2007-2008. Heracles Co. (Lafarge), Greece

Transformation of kiln from grey to white clinker (250'000 tpy).

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Audits / Due Diligence (continuation)

2022. Apaxco, Mexico

Opportunity study for the complete plant rehabilitation and the installation of a new 3'000 t/d line.

2020. Dakhla Amenagement SA, Morocco

Technical audit of the grinding plant with a 100,000 t/a CPJ 45 capacity according to Moroccan norm.

2013. Addis Abeba, Ethiopia

Technical audits of two plants in Mojo and Gebre Guracha with vertical shaft kilns for a combined capacity of 1.1 mio. tpy.

2013. Onigbolo Cement, Benin

Technical audit of the 500'000 tpy cement plant.

2012. Carthage Cement, Tunisia

Technical and financial audit of the 2.4 mio. tpy Dgehal Resas Cement plant.

2009. Onigbolo Cement, Benin

Technical audit of the 500'000 tpy cement plant.

Exploration and Mining

2022. Novacim, Morocco

Review of the exploration data, 3D geological and bloc modelling, and extraction scheduling.

2021. International Cement Company Ltd, Nigeria

Review of the 3D geological modelling after the second drilling campaign, and bloc model estimation.

2017 - 2018. Ultratech, Shambhupura plant, *India*

Review of the exploration work and update of the bloc model.

2016 - 2017. International Cement Company Ltd, Nigeria

Planning and management of exploration work.

2015 - 2016. Cevital Minerals, Algeria

Exploration campaign, 3D geological and bloc modelling, and extraction scheduling.

2014 - 2016. Giant Cement Works, Nigeria

Planning and management of exploration work, geological 3D modelling, and bloc modelling.

2013 - 2014. Yamama Cement, Saudi Arabia

Planning and management of a 285 drill hole campaign for a 12.7 mio. tpy Greenfiel cement plant, 3D geological model, estimation of the bloc model, and planning of the extraction.

2013 - 2014. Quiboco Cement Industries Ltd, Uganda

Exploration campaign in a marble deposit.

2011. PHME, Saudi Arabia: Assessment of raw materials.

2010 - 2012. SGTM, *Morocco:* Raw material study and 3D geological modelling.

2009 - 2013. La Nouvelle Cimenterie du Bénin, Benin

Complete raw material study, 3D geological modelling and bloc modelling, and extraction scheduling.

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Exhibitions / Publications

- 2013 AUCBM, Jordan: Presentation about the New Cement Plant of Benin Project.
- 2012 Cemtech Europe, **Switzerland**: Presentation about quarry optimization.
- 2011 AUCBM, **Jordan**: Presentation about professional project management.
- 2011 "International Cement Revue", Publication about optimizing raw material management.
- 2010 AUCBM, *U.A.E.*: Presentation about raw material management.
- 2009 "Worldcement" Magazine, **Senegal**: Article about the extension in cement capacity in "Les Ciments du Sahel".

Other main projects in which our management team has been involved:

2004 Central Asia Cement	Kazakhstan	Cement plant revamping
2004 Hope Cement	United Kingdom	Indirect firing system extension
2004 Abco S.A.	Dominican Republic	Cement grinding plant
2001 Asment Ouled Zidane	Morocco	Cement plant design study
2000 Amran Cement Plant	Yemen Clinker	prod. upgrading study up to 1 mio. tpy
1996 Diamou Cement Plant	Mali	45'000 tpy cement plant (expertise)
1996-1999 Oman Cement Co.	Oman (Muscat)	Cement plant extension
1995 APC 1.4 MTY	Philippines	1.4 mio. tpy cement plant
1995-1998 Bosowa	Indonesia	1.5 mio. tpy cement plant
1995 Maple Leaf	Pakistan	1 mio. tpy, cement plant
1994 Kuwait Cement Co.	Kuwait	5'500 tpd of clinker production line
1994 Eastern Province Cement	Saudi Arabia	2 x 1 mio. tpy cement plant
1994 Bizerte Cement	Tunisia	Relocation of primary crusher
1993-1995 Gaborone	Botswana	400'000 tpy cement grinding plant
1993 Hama	Syria	1 mio. tpy cement plant
1989-1992 Cigu Cement	French Guinea	600'000 tpy cement grinding plant

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