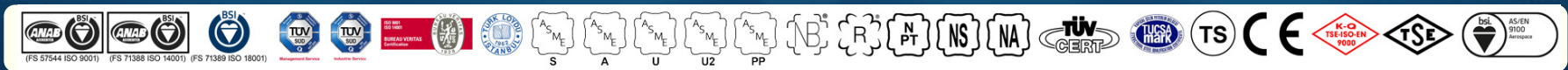




ENKA IN LIBYA

2017



ENKA in Libya

No	Project Title	Business Line	Country	Location	Start Date	Finish Date
1	640 MW Awbari Gas Turbines Power Plant	Power Plant	Libya	Awbari	12/1/2010	1/2/2018
2	Al-Amal Deaf and Dumb Education Centre Renovation Project (terminated)	Civil	Libya	Tripoli	2/1/2010	12/1/2012
3	Tripoli State Guest House	Civil	Libya	Tripoli	10/1/2009	8/1/2010
4	Tripoli Chamber of Commerce and Industry Federation	Civil	Libya	Tripoli	8/1/2009	10/1/2009
5	Zwitina CTG Building	Power Plants	Libya	Zuwaytinah	9/24/2008	1/16/2009
6	570 MW Zwitina Gas Turbines Power Plant	Power Plant	Libya	Zwitina	4/26/2008	7/21/2010
7	Supply and Erection of Zawia Potable Water Pipeline Project	Oil & Gas, Petrochemicals	Libya	Zawia	6/23/2007	6/30/2011
8	ZUARA Desalination Plant Project (Sea Water Thermal (MED-TVC) Plant)	Oil & Gas, Petrochemicals	Libya	Zuara	3/14/2007	11/30/2010
9	Tripoli State Guest Houses	Civil	Libya	Tripoli	9/1/2006	6/1/2009
10	Derna Desalination Plant Project (Sea Water Thermal (MED-TVC) Plant)	Oil & Gas, Petrochemicals	Libya	Derna	8/5/2006	8/30/2010
11	Soussa Desalination Plant Project (Sea Water Thermal (MED-TVC) Plant)	Oil & Gas, Petrochemicals	Libya	Soussa	8/5/2006	8/15/2010
12	Zawia Desalination Plant Project (Sea Water Thermal (MED-TVC) Plant)	Oil & Gas, Petrochemicals	Libya	Zawia	7/11/2006	2/29/2012
13	Souq Al-Khamis Cement Plant Kiln Section Replacement Project	Civil	Libya	Souq Al Khamis	10/9/2005	6/30/2007
14	Erection of Grate Cooler at Benghazi Line II	Civil	Libya	Benghazi	5/7/2005	10/31/2005
15	Maintenance and Repair Project at LISCO Misurata Ship Port	Civil	Libya	Misurata	1/27/2004	6/12/2004
16	Dedusting Bag Filter Rehabilitation Project	Civil	Libya	Lebda,Mergib, Souq Al Khamis,Zliten	7/16/2003	3/15/2008
17	Industrial Type Kraft Paper Bags Manufacturing Plant Musellata	Civil	Libya	Mesellata	12/25/2001	9/9/2004
18	Technical Assistance & Supporting Contract in Misurata	Civil	Libya	Misurata	11/1/2001	12/1/2008
19	LEBDA Cement Plant, Limestone Hopper Modification	Civil	Libya	Khoms	3/3/2001	3/7/2002
20	LEBDA Cement Plant, Clinker Cooler Renovation	Civil	Libya	Khoms	3/3/2001	3/7/2002
21	Cement Plant, Electrostatic Precipitator & Water Spray System Renovation	Civil	Libya	Souq Al Khamis	1/1/2000	4/5/2001
22	Beyda Construction Project	Civil	Libya	Benghazi	4/1/1998	12/1/2003
23	Benghazi Residential Unit Project	Civil	Libya	Benghazi	3/1/1998	12/1/2003
24	Technical Assistance Contract for the Performance of 5.028 Residential Units	Civil	Libya	Benghazi	11/1/1997	12/1/2003
25	Tripoli Construction Project	Civil	Libya	Tripoli	11/1/1996	5/1/2001
26	Zliten Cement Plant, Replacement of Gas Ducts	Civil	Libya	Zliten	1/1/1995	1/1/1997
27	Lebda Cement Plant, EP Replacement Project	Civil	Libya	Khoms	3/31/1994	1/24/1995
28	Amra Housing Project	Civil	Libya	Harawa	1/1/1994	5/1/2000
29	Jaarif Housing Project	Civil	Libya	Jaarif - Budahi - Hişa	1/1/1993	8/1/1997
30	Harawa Housing Project	Civil	Libya	Sirte - Harawa	7/1/1992	7/1/1998
31	Harawa Housing Project	Civil	Libya	Harawa	4/1/1992	12/1/1995
32	Brega New Town Project Coastal Highway	Infrastructure	Libya	Marsa El Brega	12/1/1991	7/1/1993
33	Sirte Housing Project	Civil	Libya	Sirte	7/1/1991	4/1/1995
34	Harawa Housing Project	Civil	Libya	Sirte - Harawa	2/1/1991	7/1/1993
35	Khoms Cement Plant, Rehabilitation Project	Civil	Libya	Khoms	5/1/1990	7/1/1993
36	Extension for Ras Lanuf New Town Phase 1 & 2	Civil	Libya	Ras Lanuf	3/1/1990	6/1/1994
37	Sirte Bay Hotel and Conference Center	Civil	Libya	Sirte	1/1/1989	7/1/1989
38	Brega New Town Hospital Project	Civil	Libya	Marsa El Brega	10/1/1988	8/1/1993
39	GMMR Benghazi End Reservoir, Phase 1	Infrastructure	Libya	Benghazi	7/1/1988	2/1/1992
40	Brega New Town Project District Center	Civil	Libya	Marsa El Brega	6/1/1988	8/1/1993
41	Brega New Town Project Water Reservoirs and Piping Works	Infrastructure	Libya	Marsa El Brega	6/1/1988	8/1/1993
42	Brega New Town Project Sewage Treatment Plant and Relating jobs	Infrastructure	Libya	Marsa El Brega	2/1/1988	8/1/1993

ENKA in Libya

No	Project Title	Business Line	Country	Location	Start Date	Finish Date
43	Derna Al-Bumba Water Project	Infrastructure	Libya	Derna	12/1/1986	3/1/1996
44	Brega New Town Project	Civil	Libya	Marsa El Brega	5/1/1986	8/1/1993
45	Libya Bombah Military Airbase, 40 Aircraft Shelters	Civil	Libya	Derna	1/1/1984	8/1/1986
46	Ras Lanuf New Town Project Contract No: 12	Civil	Libya	Ras Lanuf	7/1/1981	5/1/1985
47	Ras Lanuf New Town Project Contract No: 11	Civil	Libya	Ras Lanuf	2/1/1981	5/1/1985
48	Lassy Computer Center	Civil	Libya	Tripoli	3/1/1980	6/1/1981
49	Waste Water Treatment Plant	Civil	Libya	Brega & Raslanuf	1/1/1980	1/1/1982
50	Tarhuna - Quasbat Road	Infrastructure	Libya	Tarhuna	1/1/1978	11/1/1981
51	Al Khoms Cement Plant	Civil	Libya	Al Khoms	3/1/1977	3/1/1979
52	Concrete Hollow Brick Factory	Civil	Libya	Benghazi	1/1/1977	5/1/1977
53	Hawari Cement Plant	Civil	Libya	Benghazi	10/1/1975	11/1/1977
54	Second Extension of Benghazi Cement Plant	Civil	Libya	Benghazi	10/1/1974	6/1/1976
55	Souk Al Khamis Cement Plant	Civil	Libya	Souq Al Khamis	8/1/1974	5/1/1977
56	Benghazi Limestone Factory	Civil	Libya	Benghazi	7/1/1973	6/1/1974
57	Benghazi Gas Turbine Power Plant	Power Plant	Libya	Benghazi	7/1/1973	5/1/1974
58	First Extension of Benghazi Cement Plant	Civil	Libya	Benghazi	3/1/1972	6/1/1973

Present at ion Out Line

POWER PLANT PROJECTS

- 570 MW Zwitina Gas Turbine Power Plant
- 640 MW Awbari Gas Turbine Project

DESALINATION PLANT PROJECTS

- Derna Desalination Plant
- Soussa Desalination Plant
- Zawia Desalination Plant
- Zuara Desalination Plant

CIVIL PROJECTS

- Sirte Bay Hotel & Conference Center
- Brega New Town Project
- Ras Lanuf New Town Project
- Harawa Town Complex Project
- Cement Plants
 - Souk Al-Khamis Cement Factory
 - First Extension of Benghazi
 - Second Extension of Benghazi
 - Hawari Cement Factory
 - Al Khoms Cement Factory

570 mw Zwitina Gas Turbine Power Plant



- Engineering, procurement, construction, commissioning and start-up of a 2 x 285 MW Simple Cycle Power Generation plant on turn-key basis.
- Power island of the plant will consist of 2 units Siemens SGT5-PAC 4000F Combustion Turbine Generator sets complete with auxiliary system which will be supplied by the Owner free-issue at site.
- **Scope** : EPC
- **Commencement**: April 2008
- **Completion** : October 2010
- **Location** : Zwitina - Libya
- **Client** : General Electricity Company of Libya

Main Work Item	Unit	Quantity
Earth Works	m ³	29,975
Concrete	m ³	11,400
Structural Steel	ton	1,600
A/G Piping	ton	203
Cabling	lm	154,000
Mech. Equipment	ton	1,360
Insulation & Paint	m ²	30,223
Buildings	m ²	5,872

640 mw Awbar i Gas Turbine Pr oject



- Engineering, procurement, construction, commissioning and start-up of a 4 x 160 MW Simple Cycle Power Generation plant on turn-key basis.
- Power Island of the plant will consist 4 units of Siemens SGT5-PAC 2000E Combustion Turbine + SGen5-100A Generator sets.
- **Scope** : EPC
- **Commencement**: December 2010
- **Completion** : July 2015
- **Location** : Awbari - Libya
- **Client** : General Electricity Company of Libya

Main Work Item	Unit	Quantity
Earth Works	m ³	95,114
Concrete	m ³	31,791
Structural Steel	ton	5,300
A/G Piping	ton	253
Cabling	lm	206,500
Mech. Equipment	ton	2,860
Insulation & Paint	m ²	32,520
Buildings	m ²	11,000

Der na Desal inat ion Pl ant Pr oject (Sea Wat er Ther mal (Med- t vc) Pl ant)



- The Project consisted of engineering, procurement, construction, commissioning and start-up of a 2 x 20.000 m³/day Water Production Plant with two type of fuel, Heavy Fuel Oil (HFO) and Light Fuel Oil (LFO), complete with all Balance of Plant (BOP) systems. Heavy fuel oil (HFO) is used as main fuel for MED Desalination Plant operation whereas; light fuel oil (LFO) are used as back-up fuels.

- **Scope** : EPC
- **Commencement**: August 2006
- **Completion** : August 2010
- **Location** : Derna - Libya
- **Client** : General Electricity Company of Libya

Main Work Item	Unit	Quantity
Concrete	m ³	14,200
Structural Steel	ton	650
Cabling	km	170
Mech. Equipment	ton	4,800
Engineering Hours	hrs	81,000
Document Qty.	pcs	1,296

Soussa Desalination Plant Project (Sea Water Thermal (Med-tvc) Plant)



- The Project consisted of engineering, procurement, construction, commissioning and start-up of a 2 x 20.000 m³/day Water Production Plant with two type of fuel, Heavy Fuel Oil (HFO) and Light Fuel Oil (LFO), complete with all Balance of Plant (BOP) systems. Heavy fuel oil (HFO) is used as main fuel for MED Desalination Plant operation whereas; light fuel oil (LFO) are used as back-up fuels.

- **Scope** : EPC
- **Commencement**: August 2006
- **Completion** : August 2010
- **Location** : Soussa - Libya
- **Client** : General Electricity Company of Libya

Main Work Item	Unit	Quantity
Concrete	m ³	11,500
Structural Steel	ton	460
Cabling	km	147
Mech. Equipment	ton	4,000
Engineering Hours	hrs	65,000
Document Qty.	pcs	1,144

Zawia Desalination Plant Project (Sea Water Thermal (Med-tvc) Plant)



- The Project consisted of engineering, procurement, construction, commissioning and start-up of a 4 x 20.000 m³/day Water Production Plant with three type of fuel, Heavy Fuel Oil (HFO), NG and Light Fuel Oil (LFO), complete with all Balance of Plant (BOP) systems. NG is planned to be used as main fuel for MED Desalination Plant operation whereas; heavy fuel oil (HFO) are used as back-up fuels.

- **Scope** : EPC
- **Commencement**: July 2006
- **Completion** : February 2012
- **Location** : Zawia - Libya
- **Client** : General Electricity Company of Libya

Main Work Item	Unit	Quantity
Concrete	m ³	8,098
Structural Steel	ton	486
Cabling	km	340
Mech. Equipment	ton	7,900
Engineering Hours	hrs	48,900
Document Qty.	pcs	1,123

Zuara Desalination Plant Project (Sea Water Thermal (MED- tvc) Plant)



- The Project consisted of engineering, procurement, construction, commissioning and start-up of a 2 x 20.000 m³/day Water Production Plant with two type of fuel, Heavy Fuel Oil (HFO), and Light Fuel Oil (LFO), complete with all Balance of Plant (BOP) systems. HFO is planned to be used as main fuel for MED Desalination Plant operation whereas; light fuel oil (LFO) are used as back-up fuels.

- **Scope** : EPC
- **Commencement:** March 2007
- **Completion** : November 2010
- **Location** : Zuara - Libya
- **Client** : General Electricity Company of Libya

Main Work Item	Unit	Quantity
Concrete	m ³	4,764
Structural Steel	ton	341
Cabling	km	185
Mech. Equipment	ton	4,800
Engineering Hours	hrs	28,300
Document Qty.	pcs	720

Sirt e Bay Hot el & Confer ence Cent er - Libya



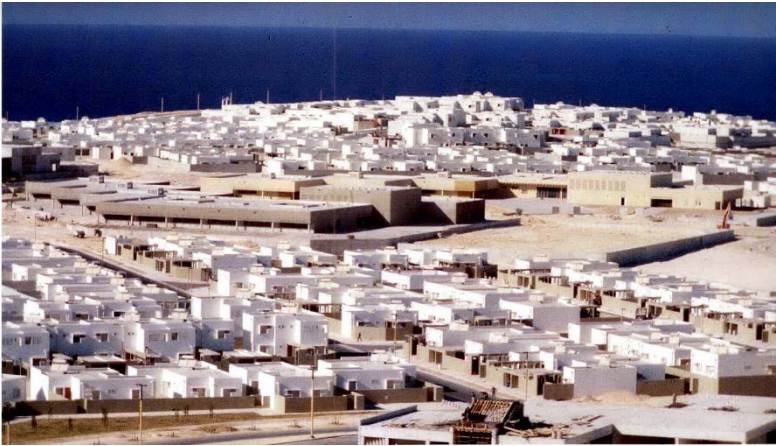
Turn-key construction of

- 4 hotel buildings each 4 stories
- Single storey Reception Hall for 400 persons.
- A tent to be used as a Conference Hall
- 43 Bungalows comprising administrative office, restaurant, cafeteria, sports center.
- Gross Area: 47.500 m².

Completed in 1989 within **180** days.

- **Scope** : EPC
- **Commencement**: January 1989
- **Completion** : July 1989
- **Location** : Sirte - Libya
- **Client** : Secretariat of Heavy Industries, Brega and Ras Lanuf Higher Committee

Brega New Town Project - Libya



Complete design and turn-key construction of 2,666 villas , 2 schools, 2 supermarkets, 2 clinics, 2 post offices, recreational facilities, 2 service shops, 2 cultural centers.

The project included all infrastructure works, landscaping, electrical installations, telecommunication systems, utilities, town gas system and interior furnishing of all buildings.

- **Key figures:**
 - Gross Area: 482,000 m²
- **Scope** : Lump sum, Turn-key EPC
- **Commencement** : May 1986
- **Completion** : August 1993
- **Location** : Marsa El Brega - Libya
- **Client** : Secretariat of Heavy Industries, Brega and Ras Lanuf Higher Committee

Ras Lanuf New Town Project - Libya



Complete final design and turn-key construction of 1,129 villa type housing units. All infrastructure works related with the new town: roads, underpasses, sewage collection system, rain water systems, water supply network, irrigation, electricity and natural gas supply and distribution, telecommunication systems and landscaping.

- **Key figures:**
 - Gross Area: 238,000 m²
- **Scope** : Lump sum, Turn-key EPC
- **Commencement:** February 1981
- **Completion** : May 1985
- **Location** : Ras Lanuf - Libya
- **Client** : Secretariat of Heavy Industries, Brega and Ras Lanuf Higher Committee

Harawa Town Complex Project - Libya



Construction of 221 one storey farm houses and 7 km long of asphalt road

Construction of fully furnished high quality 59 villas including services buildings, roads and infrastructure in Sirte

Construction of villas, recreation centers, governmental houses, infrastructure works, roads, warehouses, poultry and gazelle farms and maintenance works

Construction of warehouses, office buildings, water reservoir, 2,5 km of pipeline, a family camp of 62 buildings.



- **Scope** : Lump sum, Turn-key EPC
- **Commencement**: February 1991
- **Completion** : July 1998
- **Location** : Harawa - Libya
- **Client** : Organization for Development of the Administrative Centers - ODAC

Cement Plants - Libya

ENKA's involvement on cement plant projects spans over 41 years and includes the completion of some 13 cement plants.



First Extension of Benghazi



Souk Al-Khamis



First Extension of Benghazi



Second Extension of Benghazi

LIBYA PROJECTS

Cement Plants - Libya

Between 1972 and 1979, ENKA together with Bilfinger Berger Bau A.G. of Germany constructed 6 cement plants to the General National Organization for Industrialization in Libya and to the Yamama Saudi Cement Co. Ltd. in Saudi Arabia:

- First Extension of Benghazi Cement Factory / Libya 600.000 t./year
- Second Extension of Benghazi Cement Factory / Libya 600.000 t./year
- Hawari Cement Factory / Libya 1.000.000 t./year
- Souk Al-Khamis Cement Factory / Libya 1.000.000 t./year
- Al Khoms Cement Factory / Libya 1.000.000 t./year



Second Extension of Benghazi

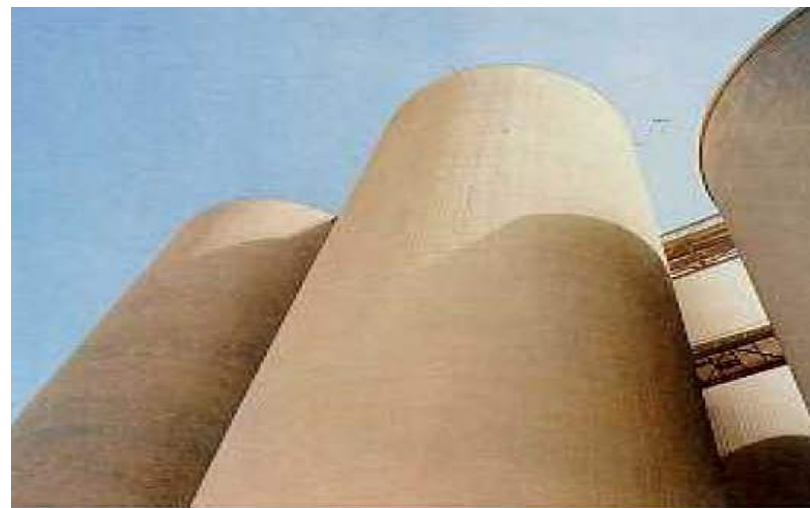


Al Khoms



Yamama

Cement Plants - Libya & KSA



Hawari

Yamama

LIBYA PROJECTS



ENKA

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