

**GENERAL
PREQUALIFICATION
DOCUMENT**



KAROLAK GmbH

INTRODUCTION

Established as a trading company serving the water industry in Africa in 1973, the planning, engineering services have been added to the company operation in 1986.

We have undertaken projects in more than twenty countries throughout Africa with widely differing climatic, cultural and economic environments.

As each project differs from similar ones previously executed a high degree of flexibility is required to identify and implement technical solutions which are relevant to the project using appropriate technology within agreed economic guidelines.

Their flexibility together with the diversity of our experience enables us to match our services closely to the needs of each of our clients among which are governments, public service authorities and private organisations.

This document is intended to describe the scope of our activities and services which we provide from our headquarter in Germany.

It is further intended to be used as general prequalification document.

Company Headquarter in the City of Weilburg / Germany





SCOPE OF SERVICES

Experience in African Countries and the Middle East

The past and present company activities concentrate on countries mainly in Africa and the Middle East..

The services offered by us, are covered by major engineering disciplines:

- Water engineering
- Pollution control
- Electrical, mechanical services

WATER ENGINEERING

urban and rural systems
pumps and pumping systems
transmission mains
treatment and storage.

POLLUTION CONTROL

sewage pumping stations
sewage treatment and disposal
low cost sanitation.

ELECTRICAL, MECHANICAL SERVICES

for above stated engineering disciplines also cover dams, filtration plants, power stations and infrastructural projects.

Out of each engineering discipline our clients may select to entrust us with the following scope of works:

1. PREPARATION OF NATIONAL / INTERNATIONAL TENDERS.

Taking into account our clients facilities, logistic, existing plant and equipment on site we prepare on behalf of our client the pricing of the electro-mechanical sections of the tender incl. technical studies as far as necessary to ensure performance of the plant selected all in accordance with the specifications, standards, drawings, provided in the tender documents.

2. FINAL DESIGN, SPECIFICATIONS, DRAWINGS FOR THE MECHANICAL AND ELECTRICAL PLANT ITEMS OF THE WORKS.

Based on the tender submitted by our client the contract award criterias, terms and conditions governing we undertake on behalf of our client as nominated subconsultant:

- checking of the contract documents, drawings and specifications
- checking of the plant and equipment on its rating, compliance, performance and suitability as specified and priced in the B/Q.
- Sourcing of alternative material, plant and equipment.
- Preparation of outline design.
- Preparation of final design.
- Preparation of method statements/ specifications
- Submission of the final design for approval.
- Obtain approval of drawings on behalf of our client.
- Preparation of tender documents for purchase of equipment, plant and machinery.
- Supervision of works performance tests.
- Supervision of packing and shipment.
- Preparation of technical documentation.

If required we also provide site supervision and performance tests on site, which includes the update and preparations of as-built-drawings.

Preparation of maintenance, service and inspection schedules.



SCOPE OF SERVICES

Experience in African Countries and the Middle East

3. DESIGN & CONSTRUCTION. REHABILITATION WORKS

This includes site visits to inspect the site in order to prepare a preliminary design and Bill of Quantities.

The works as specified under section two is included following the preliminary design works. Site supervision will be undertaken by our engineers.

Civil works will be subcontracted in accordance with project drawings and specifications issued by us.

Upon completion of the civil and electro-mechanical works the plant is tested to its capacity and handed over to our client.

In case of maintenance requirements this works be offered against agreed rates.

4. MATERIAL, PLANT AND MACHINERY SUPPLY

Independent at any design work carried out by us we provide sourcing and supply of material, plant and equipment for particular sections of the works covered by the stated engineering disciplines mentioned above.

5. EXPERIENCE IN AFRICAN COUNTRIES

We have extensive experience and during the past 15 Years have worked in the following countries:

BENIN
ZAIRE
ETHIOPIA
GHANA
KENYA
LIBYA
MAURITIUS

UGANDA
ZIMBABWE
TANZANIA
SUDAN
SOMALIA
NIGERIA
NAMIBIA



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BANKERS REFERENCE

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to whom it may concern

IHRE ANFRAGE - YOUR INQUIRY - VOTRE DEMANDE - SU CONSULTA

Nr./No	vom/dated/du/del	Ort/Datum - Place/Date - Lieu/Date - Lugar/fecha
		Schwäbisch Gmünd, 20.01.1999

AUSKUNFT	INFORMATION	INFORMATION	INFORMACION
erteilt unter den auf der Rückseite abgedruckten Einschränkungen	given subject to the reserves printed overleaf	donnée sous les réserves mentionnées au verso	Este informe se da bajo las reservas anotadas a dorso

Über/on sur/sobre

Bernd Karolak und
Karloak GmbH Gesellschaft für Außenhandel mit afrikanischen Ländern,
Buchwaldstr. 8, 35781 Weilburg

we are in business relations with subject company since many years.
We have granted credit facilities, which have been always used within
the terms agreed upon. Obligations have been met in correct manner and
the account management is well-ordered.

The overall business situation makes a well-ordered impression.
As far as we can observe, liabilities have always been met punctually to date.

Without liability or obligation on our part.

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Please see overleaf
Veuillez voir au verso
Si please observar el dorso

Anzahl Seiten Total Pages No de Pages	- 1 -	Datum Date	22.01.99	FAX
An/To/A	Karloak GmbH			
FAX No.	06471 18266			
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MAJOR CLIENTS

STRABAG INTERNATIONAL GMBH	COLOGNE-GERMANY
BILFINGER & BERGER BAUKTIENGESELLSCHAFT	WIESBADEN GERMANY
JULIUS BERGER NIGERIA PLC	ABUJA NIGERIA
BENGAR LIMITED	KADUNA NIGERIA
WRECA	KANO NIGERIA
MINISTRY OF WATER, LANDS and ENVIRONMENT	UGANDA
NATIONAL WATER AND SEWERAGE CORPORATION	UGANDA
ARABIAN CEMENT COMPANY	LIBYA
TAWA DESALINATION GMBH	MAINZ-GERMANY
PROCONT GMBH	PIRMASENS-GERMANY

WATER ENGINEERING

The Water Supply Department is experienced in the development of schemes from economic and technical feasibility studies, through detailed design, tender evaluation, inspection of materials to construction supervision. Commissioning, training and assistance in management of operations is also included in our service if required.

Treatment

Process requirements for water treatment are established by water analyses and laboratory tests before preparing specifications for plant and equipment, which will produce water of consistently acceptable quality.

Pumps

Pumping equipment must combine reliability with minimum energy consumption and we are experienced in identifying the pump type most appropriate to the supply system characteristics and in specifying the associated control and drive equipment. Performance testing of plant, both in the factory and after erection, is an important part of our service.

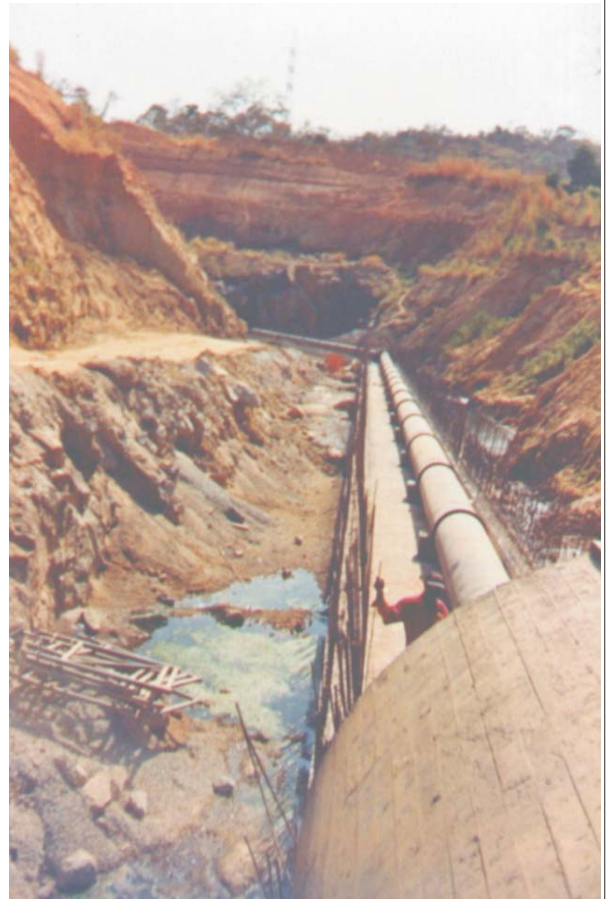
Transmission pipelines

Our experience in transmission pipeline design includes selection of pipe materials taking into account not only the material construction cost of the pipeline but whole-life costs such as operation, maintenance and corrosion protection.

Distribution systems

The department's experience in computer-aided-design CAD, for both new networks and improvements to existing systems is available.

YANYAN KARU
WATER SUPPLY PROJECT NIGERIA.
Gravity mains tank 4 to tank Karu. DN700 D.C.I.
treated water pipeline to tunnel inlet at west end of false tunnel.



POLLUTION CONTROL

Conventional waste water treatment plants mainly in operation in Africa basically included in its sequence of waste water treatment process the following stages:

- Screening
- Grit separation
- Primary sedimentation
- Activated sludge aeration or
- Biological filtration
- Final sedimentation
- Discharge of treated effluent.

We have experience in rehabilitation works of this type of waste water treatment plants inclusive of incorporating improvements to the treatment process considering additional inflow of industrial or agricultural effluents connected to the incoming sewer pipework due to industrial development in the area.

We have further installed compact sewage treatment plants ranging from 100-1000 PE serving communities, hotels in East Africa and Mauritius.

Additional filtration and chlorination systems connected to the treated effluent discharge allows safe use of the effluent for irrigation purposes.

River water treatment plant
MAKURDI-NIGERIA
Contractor: Strabag Construction Nigeria Ltd.



ELECTRICAL, MECHANICAL SERVICES

Supporting services for the wide range of projects undertaken by us, many of them multi-disciplinary, are provided by specialised Electrical and Mechanical Engineers.

Services can be provided through all project stages: investigations, design, protection of contract documents, tender evaluation, contract administration, supervision of installation, inspection and start up of all mechanical and electrical plant. Modernisation and upgrading are also undertaken in conjunction with refurbishment of industrial and commercial properties.

Electrical engineering

In addition to the electrical power supply and control systems associated with projects, we have been responsible for the engineering of standby and base load electricity generating stations, distribution networks, telemetry, radio and telephone communication systems and special lighting schemes for the sites.

Mechanical engineering

Our mechanical engineering work ranges from small individual borehole water supply pumping schemes and packaged sewage treatment plants, up to large pumping projects and treatment plants for major irrigation, water supply, sewerage and drainage projects required for large scale urban and agricultural development.

Many projects incorporate aux. works associated with the project also by this services such as:

- Air conditioning
- Ventilation
- Laboratory equipment, chemicals
- Plumbing and drainage
- Generating sets
- Compressed air systems
- Lighting
- Domestic power
- Process power - HV systems
- Substations and transformers
- Communication systems
- Fire detection and control systems
- Security and special lighting systems

One out of six units booster pumps installed in the pumping station near the water reservoir Talyha, Libya.





PERSONNEL CAPABILITIES

For specific positions essential to contract implementation, the names of at least two candidates qualified to meet the specified requirements stated for each position is listed. The data on their experience are provided in separate sheets attached.

1	PROJECT MANAGER	
	NAME OF PRIME CANDIDATE	BERND KAROLAK
2	DESIGN MANAGER (WATER TREATMENT PROCESS + CIVIL)	
	NAME OF PRIME CANDIDATE	HARTMUT NEUL
3	DESIGN MANAGER (ELECTRICAL PLANT)	
	NAME OF PRIME CANDIDATE	BERND KAROLAK
	NAME OF ALTERNATIVE CANDIDATE	P.VLAHOVIC
4	DESIGN MANAGER (PUMPING / MECHANICAL)	
	NAME OF PRIME CANDIDATE	F.P. SEILER
5	DESIGN MANAGER (HYDRAULIC - STATIC)	
	NAME OF PRIME CANDIDATE	F.P. SEILER
6	DESIGN MANAGER INFRASTRUCTURE	
	NAME OF PRIME CANDIDATE	F.P. SEILER