



Tehran Sahab Consulting Engineers

since 1987

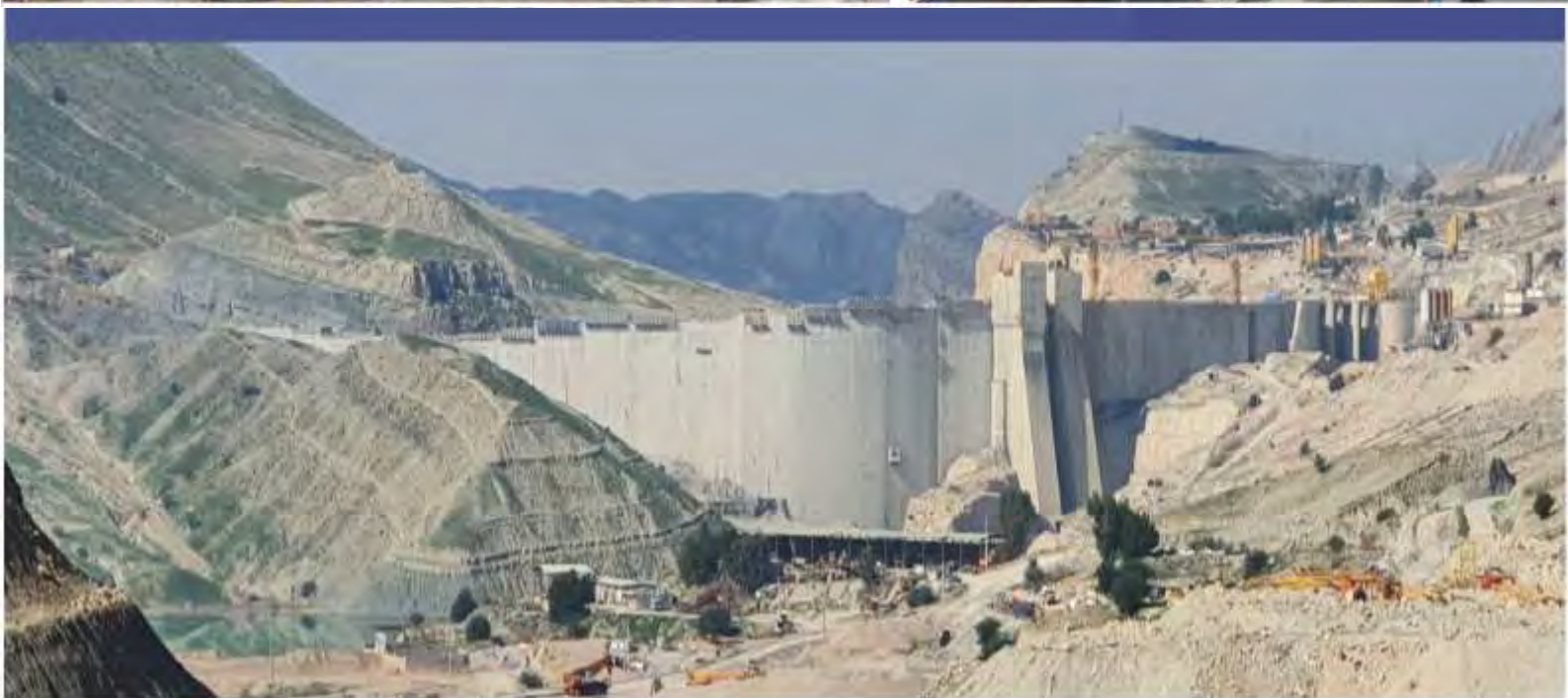


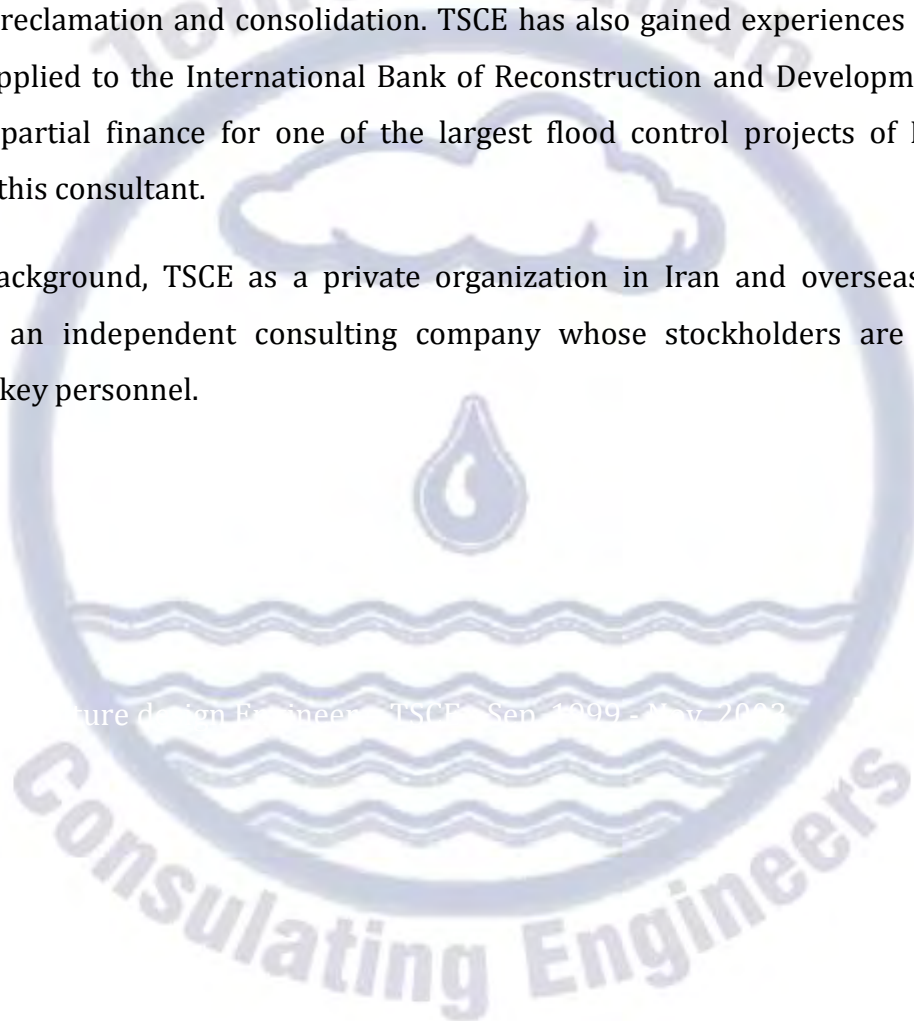
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1. Introduction

Tehran Sahab Consulting Engineers (TSCE) was established in 1987. TSCE, had been involved in advanced technology in the performing of the projects in planning, designing, Quality control and supervision of construction of dams, flood Control, hydraulic structures, such as diversion weirs, water conveyance by canals, regulation reservoirs, pumping stations, pipelines, service reservoirs, distribution Networks for municipal and industrial water supply, water and wastewater networks and treatment, irrigation and drainage networks, agricultural developments, reclamation and consolidation. TSCE has also gained experiences in contract management applied to the International Bank of Reconstruction and Development (IBRD) which offered partial finance for one of the largest flood control projects of Iran which undertaken by this consultant.

With such a background, TSCE as a private organization in Iran and overseas acts as a voluntary and an independent consulting company whose stockholders are the firm's executives and key personnel.



2. Company profile

2-1- INTRODUCTION AND BACKGROUND

Tehran Sahab Consulting Engineers Company (private company) have been established in 1987, and is working to study and design the concerned projects actively and continually ever since. The company have been registered and ranked by Budget & plan Organization of I.R. of Iran in all fields, as follows:

- Grade A of dam designing projects
- Grade B of drainage and Irrigation networks projects
- Grade A of sewage and Water supply system design projects
- Grade B of river Engineering and Protection projects
- Grade C of Structure Design projects
- Grade C of Environment projects
- Grade C of Road projects

A list of Some Company's activities is summarized as follows:

- Studies of comprehensive plans of water resources
- Design and Studies of flood control systems
- Design and Studies of drainage and irrigation networks
- Design and Studies of agriculture and internal field operation
- Design and Studies of diversion and storage dams
- Design and Studies of collection and disposal of surface waters
- Design and Studies of water supply, Transmission and distribution systems
- Design and Studies of water conveyance systems
- Design and Studies of sewage and water- treatment plants
- Design and Studies of Hydropower Plants
- Design and supervision of Roller Compacted Concrete Dams.

Specification of certificate which indicates TSCE's grades, were registered and ranked by Budget & plan Organization of Iran.

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ردیف فعالیت	پایه	تعداد کار معیار	ظرفیت معیار (میلون ریال)	تعداد کار فتهای شده	تعداد کار آزاد	امتیاز قراردادی-تایید شده
تاسیسات آب و فاضلاب	۱	۶	۲۲۰۶۸۰	۲	۲	۳۶۴
حفاظات و هیدروسی رودخانه	۲	۵	۱۴۴۱۷۶	۲	۴	۱۷۲
راه سازی	۳	۴	۲۴۴۸۷	۲	۲	۰
سواره	۳	۴	۲۷۱۸۷	۲	۲	۰
سندسازگی	۱	۶	۲۳۹۸۴۳	۴	۲	۶۳۲
شبکه های آبیاری و زهکشی	۳	۴	۵۷۶۶۹	۲	۲	۱۲۴
محیط زیست	۳	۴	۲۴۷۱۶	۲	۲	۰

شماره: ۶۴۴۸۲۲

تاریخ: ۱۴۰۱/۱۱/۲۹

پوست:



گواهینامه صلاحیت خدمات مشاوره

جناب آقای امیرحسین صداقت

مدیرعامل محترم شرکت مهندسين مشاور تهران سحاب

شماره ثبت: ۶۳۵۰۶

شناسه ملی: ۱۰۱۰۱۰۸۴۹۹۸

با استناد به مصوبه شماره ۲۰۶۳۷/ت/۲۸۴۳۷ هـ مورخ ۱۳۸۳/۴/۲۳ هیأت محترم وزیران و با توجه به احراز شرایط لازم و تایید صلاحیت آن شرکت در سامانه جامع تشخیص صلاحیت عوامل نظام فنی اجرایی، به این وسیله صلاحیت آن شرکت برای انجام خدمات مشاوره به شرح زیر اعلام می گردد.

پایه ۳	تخصص محیط زیست	با تعداد ۴ کار مجاز
پایه ۳	تخصص سازه	با تعداد ۴ کار مجاز
پایه ۲	تخصص حفاظت و مهندسی رودخانه	با تعداد ۵ کار مجاز
پایه ۱	تخصص تأسیسات آب و فاضلاب	با تعداد ۶ کار مجاز
پایه ۳	تخصص شبکه های آبیاری و زهکشی	با تعداد ۴ کار مجاز
پایه ۱	تخصص سدسازی	با تعداد ۶ کار مجاز
پایه ۳	تخصص راه سازی	با تعداد ۴ کار مجاز

رعایت مفاد قانون برگزاری مناقصات به شماره ۱۳۰۸۹۰ مورخ ۱۳۸۷/۱۱/۱۷ آیین نامه های اجرایی مربوطه و ظرفیت کاری مجاز در زمان ارجاع کار توسط آن شرکت ضروری است.

ارائه خدمات مدیریت طرح در تخصص های «تأسیسات آب و فاضلاب» با پایه ۱، «سدسازی» با پایه ۱ و «حفاظت و مهندسی رودخانه» با پایه ۲ توسط دارنده این گواهینامه مجاز است.

سیدجواد قانع فر

رئیس امور نظام فنی و اجرایی، مشاوران و پیمانکاران

این گواهینامه از تاریخ صدور تا پایان دوره ارزشیابی و حداکثر تا تاریخ ۱۴۰۵/۱۱/۱۸ معتبر می باشد.

- هرگونه تغییر در ارکان و سهام شرکت و اطلاعات امتیازآوران (مدیرعامل، هیأت مدیره و کارکنان امتیازآور)، باید حداکثر ظرف سه ماه در سامانه ساجات (<http://sajat.mporg.ir>) ثبت شود.
- هر قرارداد جدید حداکثر ظرف سه ماه پس از انعقاد قرارداد و صورت وضعیت های جدید پس از تأیید کارفرما باید در سامانه ساجات ثبت شود، تا امتیاز آنها هنگام تشخیص صلاحیت دوره بعد و آزادسازی ظرفیت منظور شود.

در صورت مغایرت مطالب این گواهینامه با اطلاعات موجود در پایگاه <http://sajar.mporg.ir>، اطلاعات پایگاه اصالت دارد.

به متدرجات پشت صفحه گواهینامه توجه فرمایید.

SGS

Certificate CH09/1456

The management system of

Tehran Sahab Consulting Engineers Co.

No. 56, Jooibar St., Fatemi Sq., Tehran, Iran

has been assessed and certified as meeting the requirements of

ISO 9001:2015

For the following activities

Design and supervision of projects in the following fields:

- Water and wastewater engineering
- Irrigation and drainage networks
- Dam engineering
- River training & control

This certificate is valid from 19 October 2021 until 18 October 2024
and remains valid subject to satisfactory surveillance audits
Recertification audit due before 19 September 2024
Issue 5. Certified since October 2009

Authorised by



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2-3- INTERNATIONAL ACTIVITY

TEHRAN-SAHAB Consulting Engineers Company has many experiences in Cooperating with other International Engineering and technical services like National Engineering Services of Pakistan Company (NESPAK). Also, the Company has done different studies internationally.

Different stages of Activities:

- Preparation of as built Drawings
- Preparation of Tender Documents
- Preparation of special and general technical specifications of plans
- Preparation of contract documents

TEHRAN-SAHAB Engineers have been composed of Iranian Engineers, Technicians, service and administrative personnel and also can cooperate with foreign experts depends on the specifications of Projects.

3- Organization

The consultancy services are divided into four divisions in TSCE:

1. Dam designing projects
2. Drainage and Irrigation networks projects
3. Sewage and Water supply system design projects
4. River Engineering and Protection projects

4. Staffing

We believe that human resources constitute the most important capital of a consulting engineering company. Therefore, TSCE have cooperated with smart, experienced and well-known key staffs.

List of Projects

Carried out by Tehran Sahab Consulting Engineering Company



The background features a large, faint, circular logo for 'Tehran Sahab Consulting Engineers'. The logo contains a stylized cloud at the top, a water droplet in the center, and wavy lines representing water at the bottom. The text 'Tehran Sahab' is arched over the top, and 'Consulting Engineers' is arched along the bottom.

Infrastructures

- **Wastewater Collection (sanitary sewer) Networks**
- **Water Transport and Distribution System**

INFRASTRUCTURES ACTIVITIES

A. NETWORKS

The following projects were implemented by TSCE in sewer network field:

1. Sanitary sewer network of Oushan, Fasham and Maigun cities.
2. Sanitary sewer network of Lavasan city
3. Sanitary sewer network of Dehdasht city.
4. Sanitary sewer network of Dogonbadan (Gachsaran) city
5. Sanitary sewer network of Langerood city.
6. Sanitary sewer network of Chaloos and Nowshahr cities.
7. Sanitary sewer network of Asadabad city.
8. Sanitary sewer network of Konarak city.
9. Sanitary sewer network of Sahand new city.
10. Sanitary sewer network of Saghez city.
11. Sanitary sewer network of Pardis new city.
12. Sanitary sewer network of Mamonieh city.
13. Sanitary sewer network of Zavieh city.
14. Sanitary sewer network of Abadeh city.
15. Sanitary sewer network of Javanrood city.
16. Revision studies of wastewater project, Chaloos and Nowshahr cities
17. Sanitary sewer network of Ivan and Sarabeleh cities.



Water and Wastewater treatment

- **Water Treatment Plants**
- **Wastewater Treatment Plants**

B. WASTEWATER TREATMENT PLANTS

The following projects were implemented by TSCE in wastewater treatment plants field:

1. Wastewater treatment plant of Lavasan city.
2. Wastewater treatment plant of Oushan, Fasham and Maigun cities.
3. Wastewater treatment plant of Asadabad city.
4. Wastewater treatment plant of Chaloos and Nowshahr cities.
5. Wastewater treatment plant of Saghez city.
6. Wastewater treatment plant of Konarak city.
7. Wastewater treatment plant of Dehdasht city.
8. Wastewater treatment plant of Langerood city.
9. Wastewater treatment plant of Pardis city.
10. Wastewater treatment plant of Mamonieh and Zavieh cities.
11. Wastewater treatment plant of Sahand city.
12. Wastewater treatment plant of Abadeh city.
13. Wastewater treatment plant of Javanrood city.
14. Wastewater treatment plant of Ivan and sarabeleh cities.
15. Wastewater treatment plant of Dogonbadan city

C. PIPELINES

The following projects were implemented by TSCE in water transmission lines field:

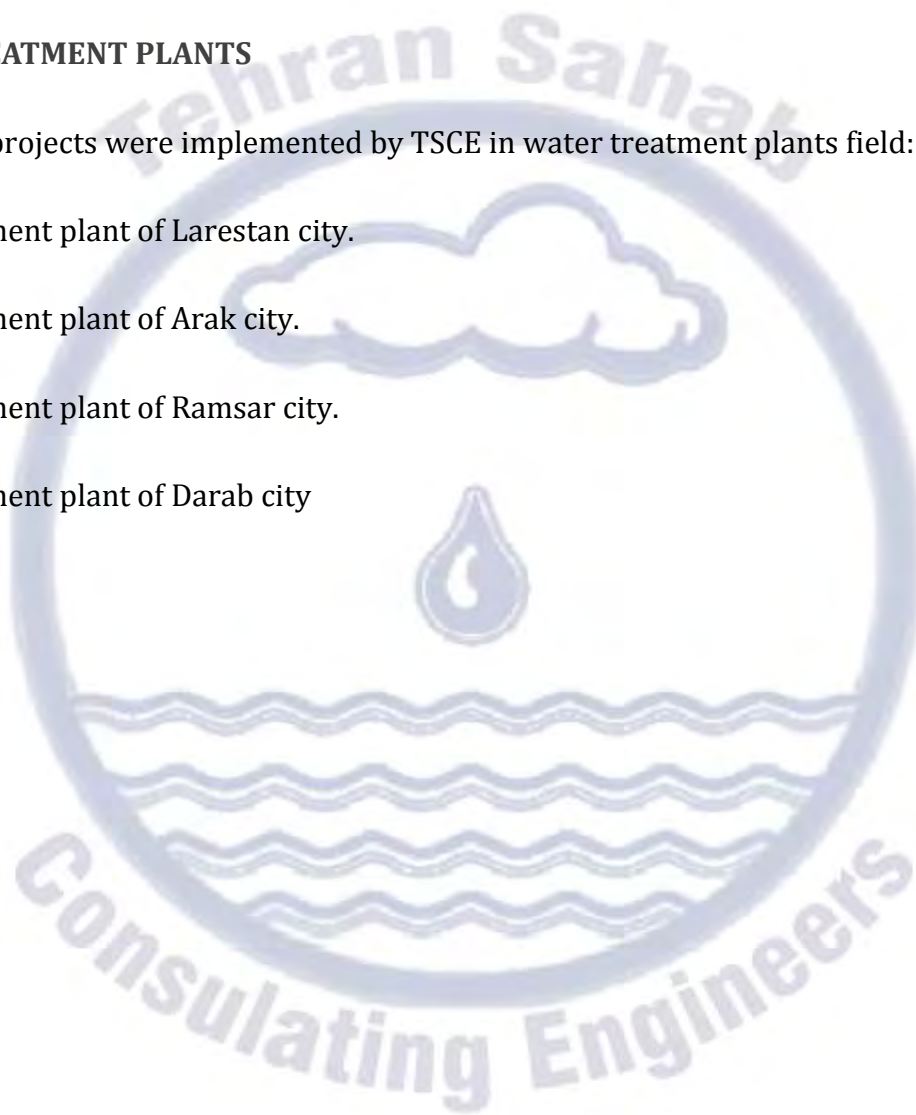
1. Project of water supply, transport, and storage and distribution network of Chaloos and Nowshahr cities, in Mazandaran province.
2. Project of water transport from Mogarmoon to lend district in Kohkiluye and Boirahmad province.
3. Project of water transport, storage and distribution network of yasouj, Dehdasht and Dogonbadan, in Kohkiluye and Boirahmad province.
4. Project of water supply, storage reservoir and distribution network, Kelardasht, Katalem and Sadatshahr cities, in Mazandaran province.
5. Project of water supply from Roodbal dam to Darab, Janatshahr, Hajiabad cities and villages located in the transport path, in Fars province.
6. Complementary studies of water supply from Arak city's water treatment plant to water storage reservoir in Markazi province.
7. Project of water transport from Shive River to Emamzade Jafar, in Kohkiluye and Boirahmad province.
8. Project of water supply, transport and distribution for Arak city, in Markazi province.
9. Project of water supply, transport and distribution for Gonbad city, in Golestan province.
10. Water supply project from Salman Farsi dam to Lavasan district, in Fars province.
11. Water supply project of Ivan, Sarabele and Darehshahr, in Ilam province.
12. Water supply project of Pardis new city, in Tehran province.
13. Water supply project of Sahand new city, in east Azarbayjan province.
14. Water supply project of Dehdasht and Kelachoo cities, in Kohkiluye and Boirahmad province.

15. Second phase studies of connection pipeline between Arak city's storage reservoirs and water treatment plant, in Markazi province.
16. Water transport Project from Meyjaran dam to Ramsar, Katalem and Sadatshahr, in Mazandaran province

D. WATER TREATMENT PLANTS

The following projects were implemented by TSCE in water treatment plants field:

1. Water treatment plant of Larestan city.
2. Water treatment plant of Arak city.
3. Water treatment plant of Ramsar city.
4. Water treatment plant of Darab city



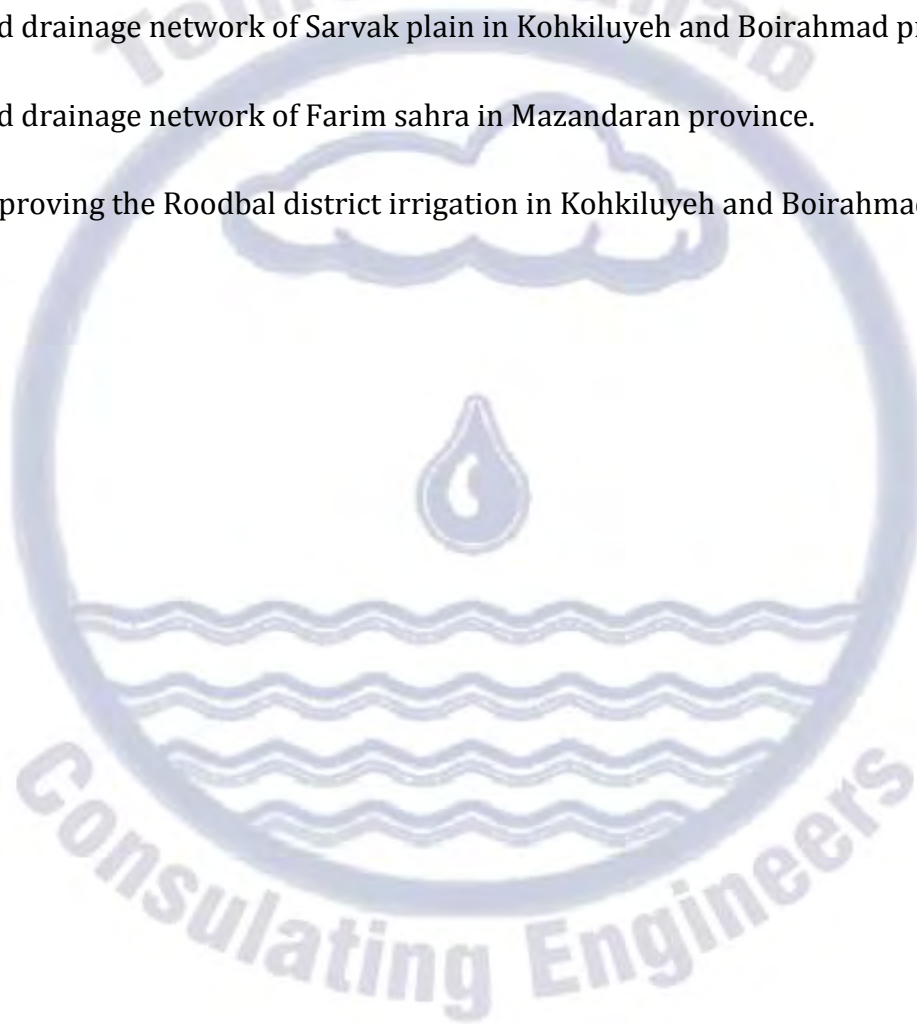
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Irrigation and Drainage Networks

IRRIGATION AND DRAINAGE NETWORKS

The following projects were implemented by TSCE in Irrigation and drainage networks field:

1. Irrigation and drainage network of Roum plain in Kohkiluyeh and Boirahmad province.
2. Irrigation and drainage network of Choram plain in Kohkiluyeh and Boirahmad province.
3. Irrigation and drainage network of Kakan plain in Kohkiluyeh and Boirahmad province.
4. Irrigation and drainage network of Sarvak plain in Kohkiluyeh and Boirahmad province.
5. Irrigation and drainage network of Farim sahra in Mazandaran province.
6. Project of improving the Roodbal district irrigation in Kohkiluyeh and Boirahmad province.



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Dam & Hydropower Projects

DAM & HYDROPOWER PLANTS

The following projects were implemented by TSCE in Dam & Hydropower plants field:

1. Cham- e- shir storage dam and power plant in Kohkiluyeh and Boirahmad province.
2. Chahnimeh- 4 dam in Sistan and Baluchistan province
3. Meyjaran storage dam in Mazandaran province.
4. Cheshmeh Ashegh storage dam in Fars province.
5. Saradan Artificial feeding dam in Sistan and Baluchistan province.
6. Rehabilitation of Shahghasem storage dam in kohkiluyeh and Boirahmad province.
7. Farim sahra storage dam in Mazandaran province.
8. Studies of optimum operation from Sistan and Baluchistan rivers water
9. Comprehensive studies of river water resources operation from Zohre and Maroon rivers in Kohiluyeh and Boirahmad province.
10. Emamzadeh Jafar (Naserabad) Artificial feeding dam in kohkiluyeh and Boirahmad province
11. Sarshileh dam stabilization project in Sistan and Baluchistan province.
12. Waste storage dam project for saghand Uranium oxide production plant in Yazd province.
13. Small hydropower plants project in Kohkiluyeh and Boirahmad province.
14. Cham-e-shir power plant project in Kohkiluyeh and Boirahmad province.
15. Independent outlet project for operation of Chahnimeh-4 reservoir in Sistan and Baluchistan province

A faint, circular logo is centered in the background. It features a cloud at the top, a stylized building or monument in the middle, and wavy lines representing water at the bottom. The text "Tehran Sahab" is arched over the top, and "Consulting Engineers" is arched along the bottom.

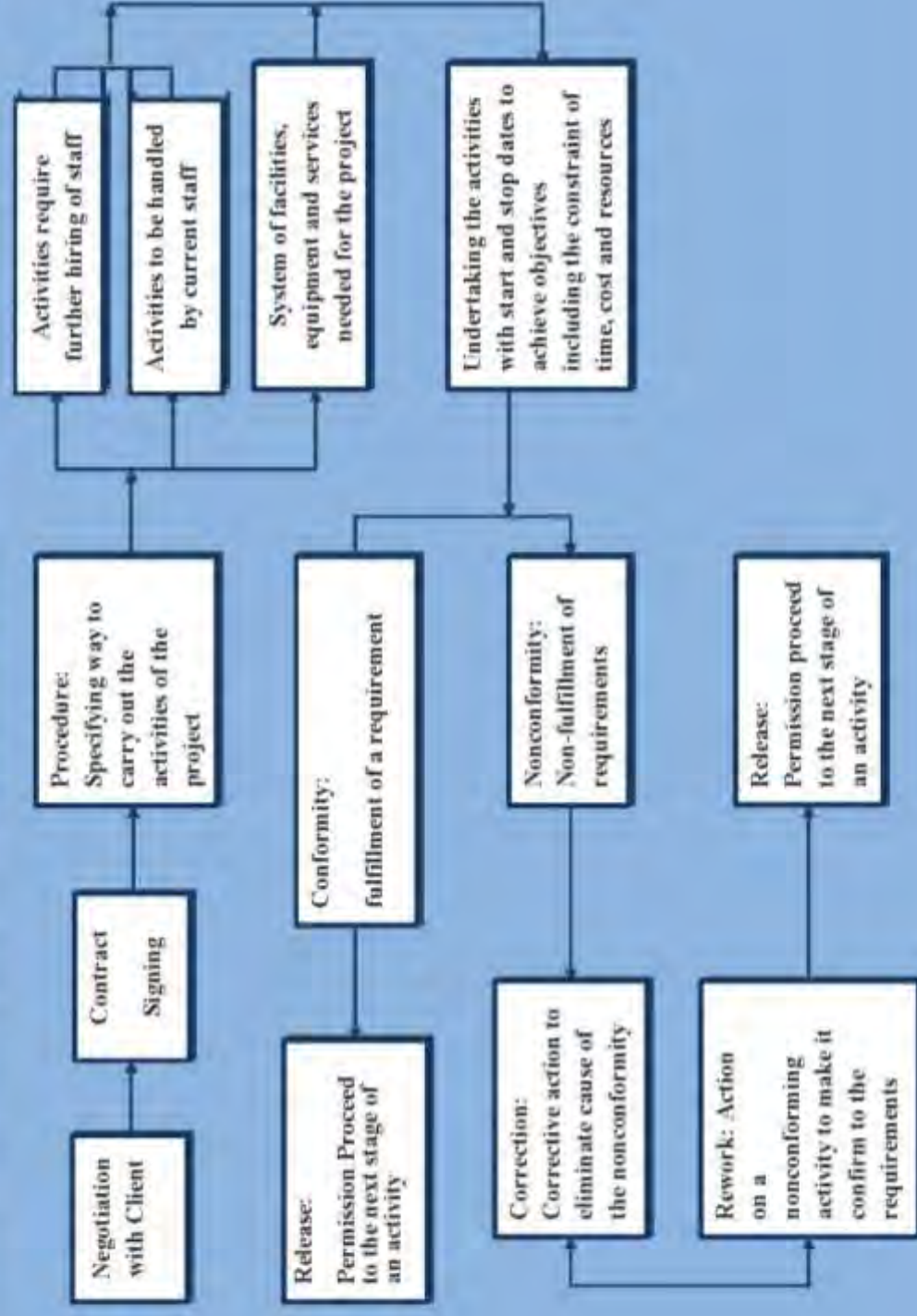
Flood Control and River Training

FLOOD CONTROL

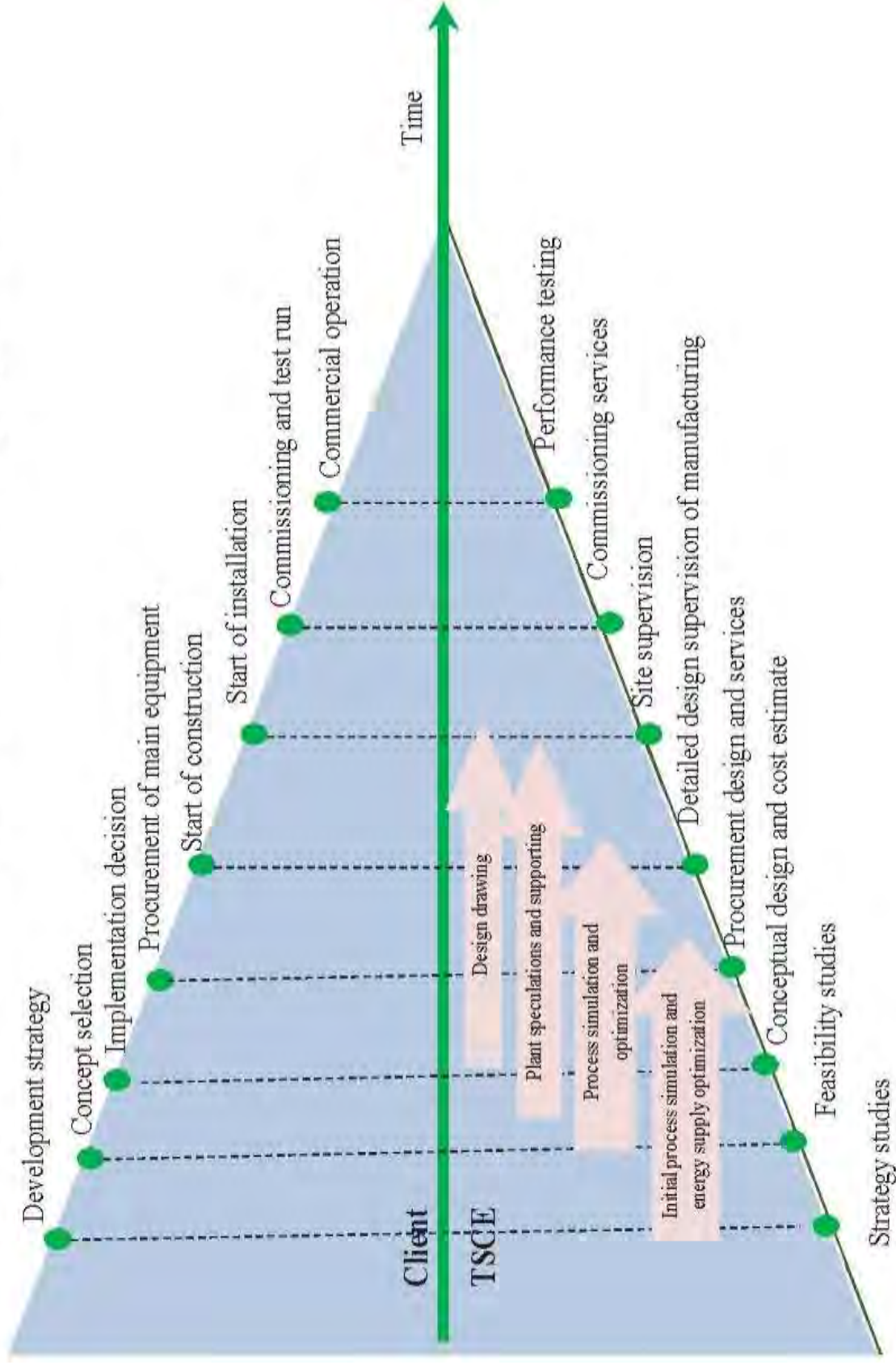
The following projects were implemented by TSCE in Flood control field:

1. Contract No.c-11: Preparation and production of Riprap beach bank and filter materials at Harmak rock mine.
2. Contract No.C-12: Weir of Niatak floodway canal and related works.
3. Contract No.C-13: Niatak river embankments from station +000 to 12+000
4. Contract No.C-14: Niatak river embankments from station 12+000 to Hamun.
5. Contact No.C-15: Bridges and flume of Niatak floodway canal.
6. Contract No.C-20: Rebuild and widening of canal feeder.
7. Contract No.C-30: Culverts for bridge of water stream.
8. Contract No.C-02: Offshore embankments of Hamun Lake at the zone of poshte ab-Miankangi and related works.
9. Contract No.C-03: Offshore embankments of Hamun Lake at the zone of shibe ab and related works.
10. Contract No.c-01A: Sistan river embankments and related works at upstream of Sistan dam.
11. Contract No.C-01B: Sistan river embankments and related works at downstream of Sistan dam.

Quality management and quality assurance policy of TSCE is currently according to ISO 9001



Development, design and construction of project schemes





Description of some Professional Experiences

CHESME ASHEGH STORAGE DAM

Client: Fars Regional Water Authority

Period: 2009-2013



Summary of technical properties for Cheshmeh Ashegh dam:

River bed elevation: +1710 m.a.s.l

Basin area: 463 km²

Average rainfall (Annual) of the basin: 330 mm

Annual average in flow volume: 52.5 MCM

Average evaporation from reservoir: 1960 mm/year

Reservoir surface area at normal elevation: 520 ha

Dam body:

Type of dam: Gravity RCC dam

Type of spillway: free ogee spillway

Length of crest in main body: 360 m

Crest width: 6 m

Maximum height from river bed: 55.5 m

Maximum height from bed rock: 60 m

Plan width at biggest section of dam: about 51.5 m

Elevation of cofferdam crest: +1723.5 m

Maximum flood level: 1765.5 masl

Reservoir volume at normal elevation: 520 ha

Annual average flow rate of the river: 49 MCM (average)

Concrete (RCC) volume: 13600 m³



Water diversion system:

Type of water diversion system: Tunnel, 5m diameter

Design discharge: 245 m³/s

Length of tunnel: 105 m

Slope of tunnel: 1.56%



Spillway:

Type of spillway: free weir on the body dam

Elevation of crest of weir: +1761 masl

Efficient length of spill way: 30 m

Impure length of spill way: 34 m

Design flow discharge: 1156 m³/s



CHAMSHIR DAM & HYDRO POWER PROJECT

Client: Iran Water & Power Resource Development (IWPC)

Construction Period: 2009-2019



Construction of dam body and auxiliary hydraulic structures (spillway, bottom outlet and diversion system) and construction of hydro power plant downstream of the dam location on Zohreh river for power generation and agricultural proposes in southwest of Iran.

Summary of technical properties



Dam body type: RCC Gravity dam
Dam body Volume: 1,300,000 mcm
N.W.L: 598 masl
Max.W.L: 605 masl
Min.W.L: 520 masl
Max. Height of the dam: 151 m
Crest length: 580 m
Reservoir vol. at N.W.L: 1800 MCM
Spillway capacity: 8000 CMS
Spillway type: Gated ogee spillway
located on right abutment of the dam.



Power generation capacity: 176 MW
($3 \times 55\text{MW} + 2 \times 5.5\text{MW}$)
Annual energy generation capacity: 500 G.W.hr
Agriculture development area: 110.000 ha.
Contractor: China Gezhuba Group Co. & Sabir Co.
Project estimated cost: 230 million Euros



Consulati

MIJARAN STORAGE DAM

Client: Mazandaran Regional Water Authority



Summary of technical properties

Dam location: 20km from SE of Ramsar

Type of dam: Rock fill dam by asphaltic concrete core

Length of crest: 180 m

Elevation of river bed at location of dam axis: 98.7 m

Elevation of dam crest: 153 m

Maximum height from river bed: 54.5 m

Volume of dam body materials: 385250 m³

Width of crest: 8 m

Foundation thickness of dam: max.220 m

Normal elevation of dam: 148 m

Length of lake: 1.8 km

Mean width of the lake: 253 m

Lake surface area: 45.6 ha

Total capacity of reservoir: 8 mcm

Efficient capacity of the reservoir: 7.56 mcm

Annual adjustable volume of water: 12-12.5 mcm



Dam body:

Type of dam Asphalt Concrete Core Rock fill Dam (ACCRD)

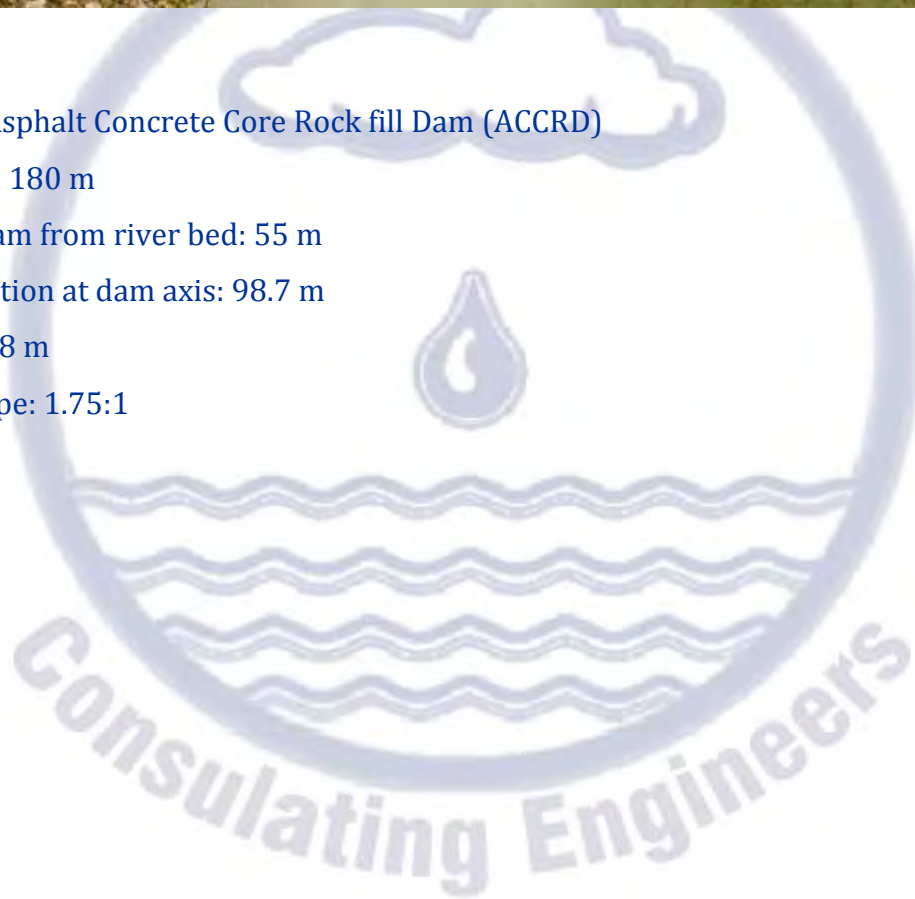
Length of crest: 180 m

Height of the dam from river bed: 55 m

River bed elevation at dam axis: 98.7 m

Width of crest: 8 m

Head water slope: 1.75:1



SHAHGHASEM DAM PROJECT

Client: Kohgiluyeh & Boyerahmad Regional Water Authority



Summary of technical properties

Type of dam:	Clay Core Rockfill Dam
River Bed Elevation:	1860 m from M.S.L
Normal water Elevation:	1894 m from M.S.L
Embankment crest Elevation:	1896 m from M.S.L
Maximum Height:	47.2 m
Crest length:	220 m
Crest width:	8 m
Storage volume:	9MCM
Annual Regulation capacity:	12 MCM
Upstream slope:	3:1
Downstream slope:	2.5:1

Intake system:

Includes Steel pipe with 2400 mm Dia. and required facilities.

Flood outflow system:

Includes a Fuse-plug with Discharge capacity of 72 m³/sec

SARADAN DAM

Client: Sistan & Baluchestan Regional Water Authority

Construction Period:

2005-2010



Technical Specifications

N.W.L:	115.0 m (local)
Max W.L.:	115.0 m (local)
Min W.L.:	103.0 m (local)
Max. Height of the dam:	22 m
Crest length:	373 m
Reservoir vol. at N.W.L:	9.3 Million m ³
Vol. of Regulated water:	13.0 Million m ³

Spillway type:	Ogee
Spillway capacity:	1585 m ³ /s
Dam body type:	Earth fill
Dam body volume:	450,000 m ³

ZABOL STORAGE DAM (CHAHNIMEH-4)

Client: Sistan Soil & Water Regional Development

Construction Period: 1992-2002

1. Contract No.1: Construction of dam from west abutment to station of +10 km.
2. Contract No.2: Construction of connecting channel and control structure from chahnimeh 3 to 4.
3. Contract No.3: construction of independent outlet system for operation of Chahnimeh-4 reservoir.
4. Contract No.4: Construction of dam from station +10 km to the east abutment

Technical Specifications

N.W.L: 492.00 (local)

Max W.L.: 499.20 (local)

Min W.L.: 484.0 (local)

Max. Height of the dam: 17 m

Crest length: 15775 m

Reservoir vol. at N.W.L: 810 Million m³

Vol. of Regulated water: 600 Million m³

Spillway type: None

Spillway capacity: None

Power generation capacity: None

Dam body type: Modified Earth fill

Dam body volume: 17 Million m³



WATER SUPPLY PROJECT FOR RAMSAR REGION

Introduction:

The project of water supply to Ramsar, Katalom and Sadat Shahr from Meijaran Dam with the purpose of water supply to different cities and in Mazandaran Province includes following items:

- Water intake system
- Water treatment plant
- Water transmission line



Characteristics of intake system:

Discharge capacity: 4 CM/S

Type of intake tower: dry tower

Maximum height: 40m

Inside diameter: 5 m

Wall thickness: 1 m

Number of inlets: 3

Tunnel cross section: circular

Tunnel diameter (uncompleted): 3.20m

Tunnel inside diameter (completed): 2.8m

Lining thickness: 0.2m

Water Treatment Plant:

The design discharge for designed treatment plant which has been submitted is $0.41\text{m}^3/\text{sec}$.

The raw water for the treatment plant will be taken from Meijaran Reservoir

Different units of treatment plant include

- Screen System
- Flow measuring device
- Micro strainer
- Ozonation system
- Chemical rapid mix unit and injection
- Flocculation unit
- Settling tanks
- Rapid gravity sand filters
- Backwash water recovery unit
- Final chlorination
- Clear water tank
- Gravity type sludge thickeners
- Filter press

Transmission line and pumping stations

- Transmission line is started from Meijaran dam treatment plant and ends up at Ramsar city. The length of the main line is 16.5 km.
- The steel pipe for the line protected against corrosion by cement mortar for inside and coal mortar for outside.
- The pipe diameter is 600 millimeter and maximum

ASADABAD CITY WASTEWATER TREATMENT PLANT

Introduction:

This plant has a treatment capacity of 20000 m³ per day which is designed to produce treatment plant effluent. All flows are concentrated within the collection system and flow by gravity to the treatment plant. After the wastewater enters influent bar screens and to flow meter and enters to the Grit chamber and inlet pump station .after preliminary treatment wastewater pumped to aeration lagoon and after clarification in sedimentation lagoon enters to chlorination unit for disinfection . Treated wastewater reused for agriculture.



Characteristics of WWTP:

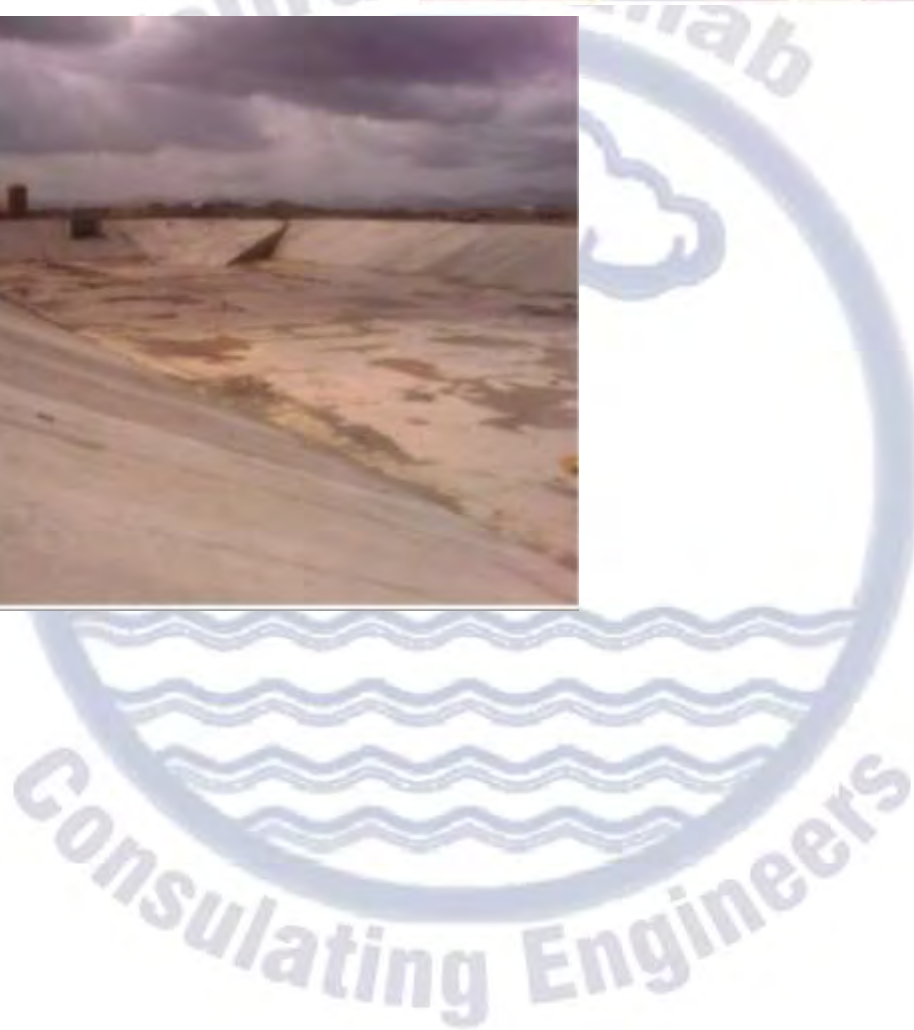
The plant location in Hamedan Province at West of IRAN South west of the Asadabad city.

- Plant capacity: 20000 m³/day
- Study Plant Module: 4
- Study Project Population: 100000
- Implemented module: 2
- Date of operation: 2012
- Treatment process: Aeration pond



Plant units:

- Mechanical and manual bar screen
- Flow measuring parshall flume
- Grit chamber
- Inlet pump station
- Aeration pond
- Sedimentation pond
- Chlorination contact tank



CHALOOS-NOSHAHR WASTEWATER TREATMENT PLANT

Introduction

This plant has a treatment capacity of 4000 m³ per day. All flows are concentrated within the collection system and flow by gravity or are pumped under pressure to the treatment plant. After the wastewater enters influent bar screens and to flow meter and enters wet-well it is pumped to the Grit chamber .after preliminary treatment wastewater enters to aeration tank and after clarification in sedimentation tank enters to UV unit for disinfection. Treated wastewater returned to Chaloos River. Sludge collect from sedimentation tanks to sludge pump station .Return sludge pump to inlet of aeration tanks and excess sludge pumped to thickening tanks. Thickened sludge enters to belt filter press unit for to dewatering.

Characteristics of WWTP:

The plant location in Mazandaran Province at north of IRAN between Chaloos city and Noshahr city.



- Plant capacity: 40000 m³/day
- Study Plant Module: 4
- Study Project Population: 180000 people
- Implemented module: 1
- Implemented population: 45000 people
- Date of operation: 2009
- Treatment process: Extended aeration



Plant units

- Mechanical and manual bar screen
- Flow measuring parshall flume
- Inlet pump station

- Grit chamber
- Aeration tanks
- Sedimentation tanks
- Sludge pump station
- UV disinfection
- Sludge thickener tanks
- Sludge dewatering unit
- Control room



OSHAN & FASHAM CITIES WASTEWATER TREATMENT PLANTS

Introduction:

Each of plants has a treatment capacity of 750 m³ per day and is designed to produce a high quality treatment plant effluent. Collected wastewater flow by gravity to the treatment plant then the wastewater enters influent bar screens and inlet pump station and after preliminary treatment wastewater pumped to SBR tanks and after each decanter cycle enters to chlorination unit for disinfection. Treated wastewater returned to Jajroud River. Excess Sludge pump to sludge silo.

Characteristics of WWTP:

The plant location in Tehran Province at north of Tehran near Oshan city and another plant near Fasham city

- Plant capacity: 750 m³/day
- Study Plant Module: 2
- Study Project Population: 8000 people
- Implemented module: 1
- Date of operation: 2010
- Treatment process: SBR



Plant units:

- Manual bar screen
- Inlet pump station
- SBR tanks Sedimentation tanks
- Chlorination contact tank
- Sludge thickener tanks
- Effluent pump station
- Control room

SAQQEZ CITY WASTEWATER TREATMENT PLANT

Introduction:

This plant has a treatment capacity of 44000 m³ per day and is designed to produce a high quality treatment plant effluent. All flows are concentrated within the collection system and flow by gravity to the treatment plant. After the wastewater enters influent bar screens and to flow meter and enters to the Grit chamber .after preliminary treatment wastewater enters to aeration tanks and after clarification in sedimentation tank enters to chlorination unit for disinfection. Treated wastewater returned to Saqqez River. Sludge collect from sedimentation tanks to sludge pump station .Return sludge pump to inlet channel of aeration tanks and excess sludge pumped to thickening tanks. Thickened sludge enters to belt filter press unit for to dewatering.



Characteristics of WWTP

The plant location in Kordestan Province at North West of IRAN and south east of the Saqqez city.

- Plant capacity: 44000 m³/day



- Study Plant Module: 3
- Study Project Population: 220000
- Implemented module: 3
- Date of operation: 2010
- Treatment process: A2O

Plant units:

- Mechanical and manual bar screen
- Flow measuring flume
- Biological tanks(Anaerobic + Anoxic + Oxen)
- Sedimentation tanks



- Sludge pump station
- Chlorination contact tank
- Sludge thickener tanks (DAF)
- Sludge dewatering unit
- Control room



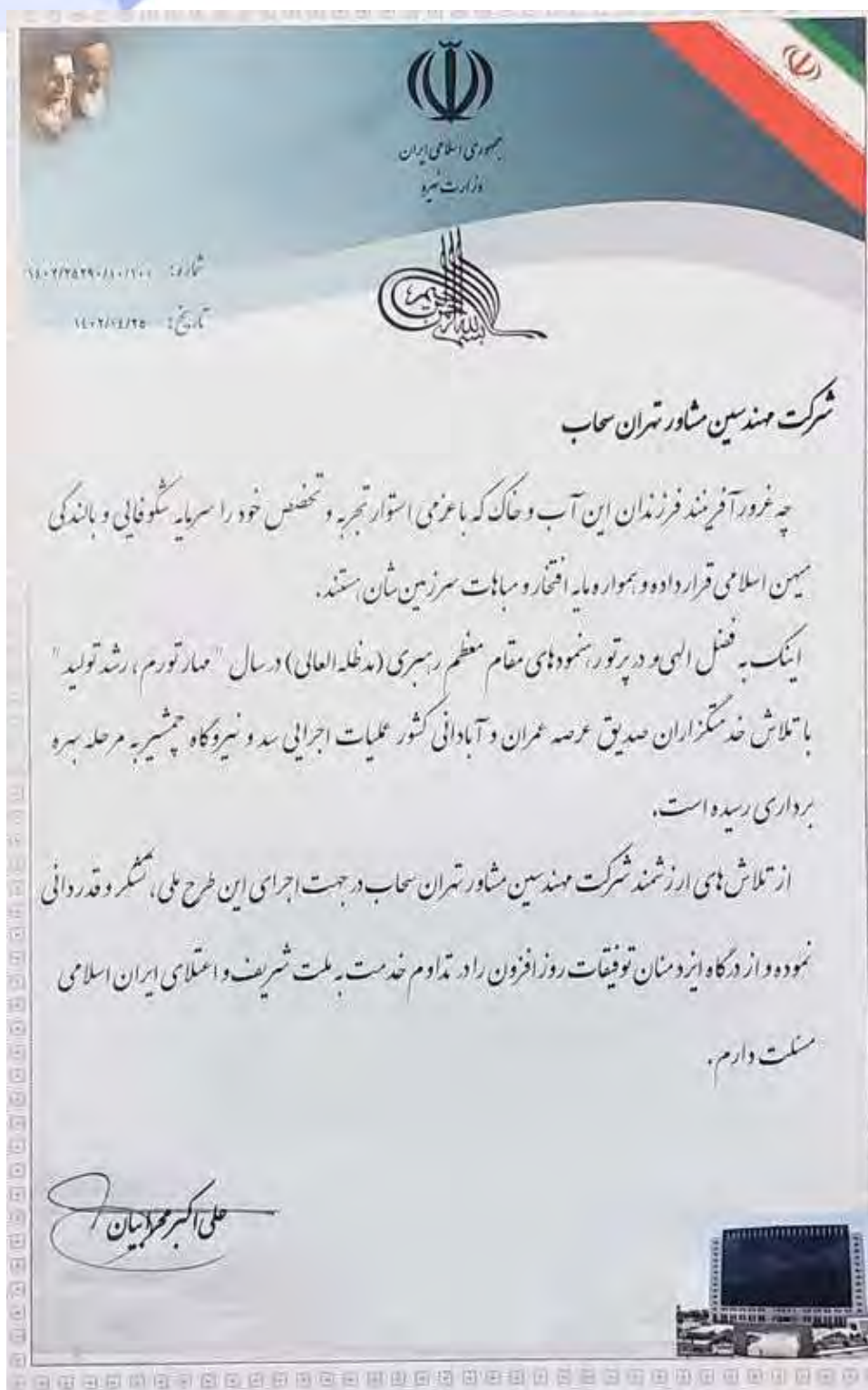
Tehran Sahab

Awards

From Pervious clients

Consulating Engineers

Award from Energy Minister of Iran, regarding cheshme Asheq Dam to TSCE (in persian)



بسم الله الرحمن الرحيم

جناب آقای دکتر ابراهیم شاه قاسمی

مکاتباتی ارزنده جنابعالی در اجرای سد مخزننی چشمه عاشق قابل تقدیر است، به پاس

بست والای حضرت عالی این لوح تقدیر تقدیم می گردد، توفیق روز افزون شما را

از خداوند متعال مسئلت دارم.

حمید حجت حیان
وزیر نیرو

ulating Engine

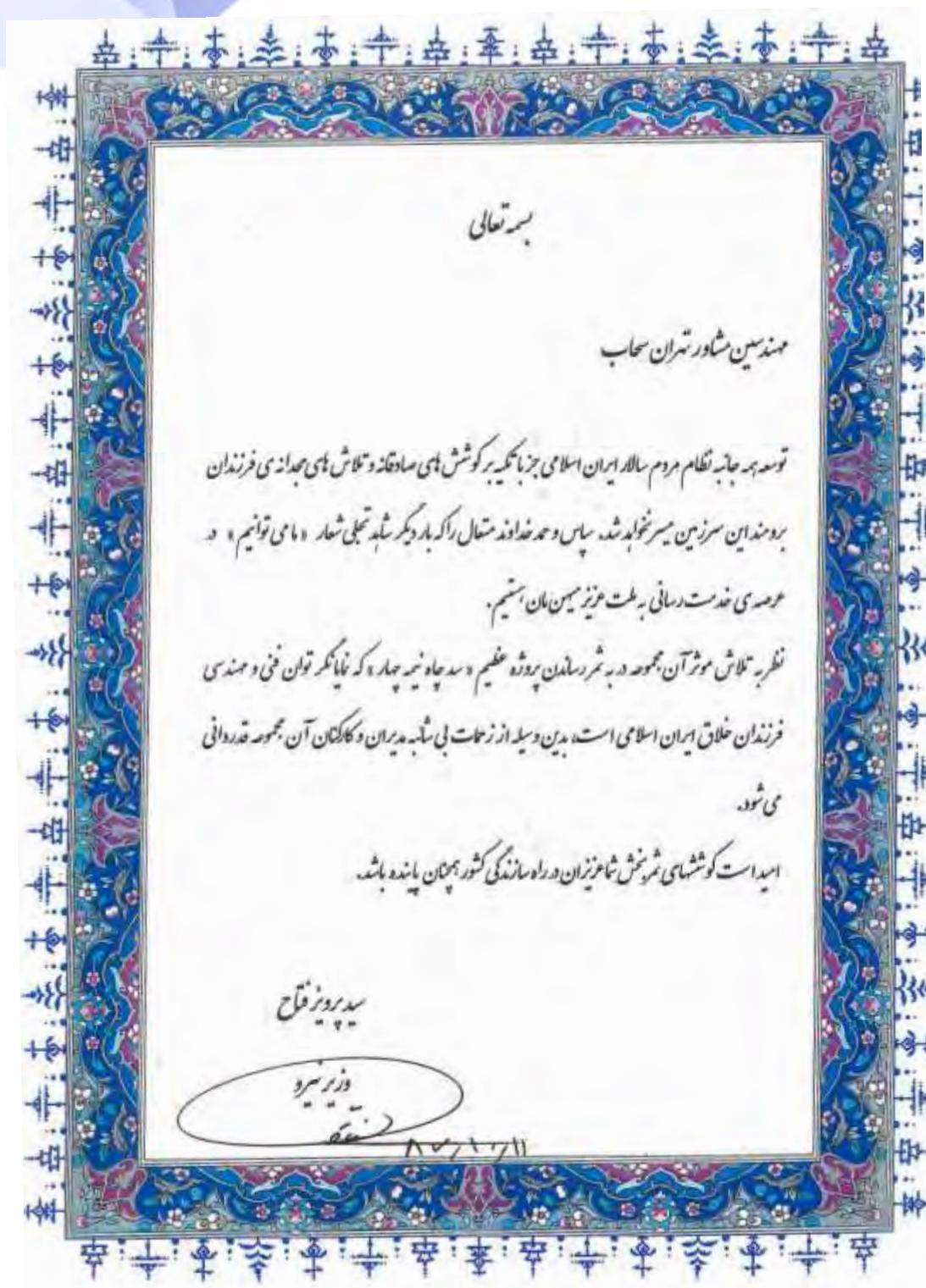
Award from Energy Minister of Iran to TSCE regarding dam activities to TSCE (in persian)



Award from C.E.O. of Iran water and Power Development Co. (IWPC) client of Cham-e-shir dam to TSCE (in persian)



Award from Energy Minister of Iran regarding Chah nimeh 4 to TSCE (in persian)



Award from Deputy of Energy Minister regarding water supply, transport and distribution for Arak city from kamalsaleh dam to TSCE (in persian)



Award from Deputy of Energy Minister regarding Larestan project to TSCE (in persian)



Award from C.E.O. of markazi water and wastewater Co. regarding WTP of Arak city to TSCE (in persian)



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Award from ACI – Iran branch regarding Chah nimeh project to TSCE (in persian)



Award from ACI – Iran branch regarding Cham-e-shir project to TSCE (in persian)

