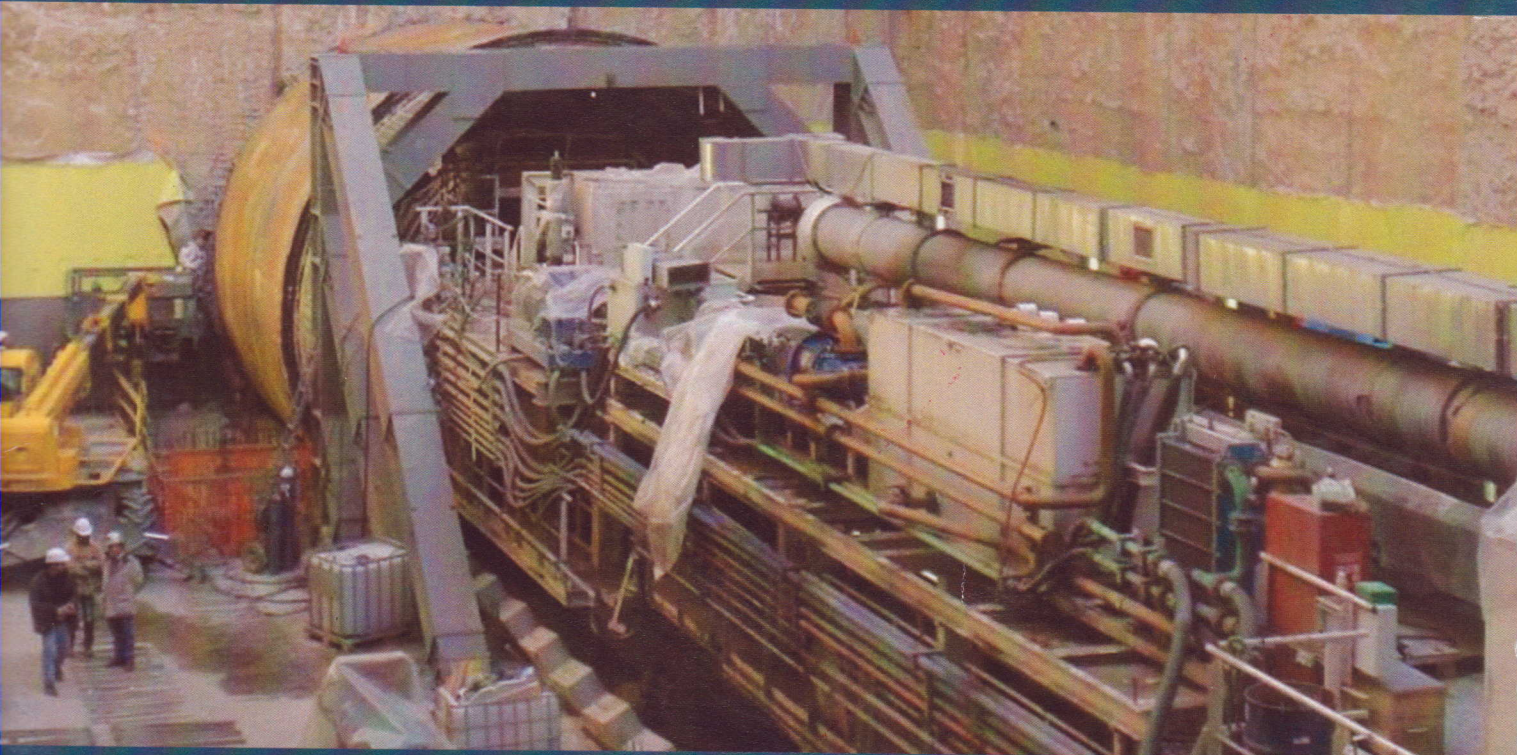


Lian Tunnel Dekamond

Engineering & Construction



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ABOUT US

COMPANY INTRODUCTION

LIAN TUNNEL DEKAMOND ENGINEERING COMPANY is an Iranian company that was established in 2008 that focused mainly on Tunnel construction projects. We want to expand our operation to a large scale begin receiving contract to do large projects such as irrigation and metro tunnel construction.

A Name You Can Trust **From Construction to Completion**

By managing projects closely, adhering to strict safety guidelines and demanding projects the highest quality workmanship, we built our reputation for completing projects on time and Conduct business with honesty and integrity.

Our Plan

Lian Tunnel Dekamond will

- Meet your expectations on time and on budget
- Provide the total solution and take care of the details
- Be a low cost producer of quality work

Our aim for every project is the same; build it safely, on time, on budget.



LIAN TUNNEL DEKAMOND ENGINEERING COMPANY believes value means providing our clients with the highest quality job for the most economical price. When you choose **LIAN TUNNEL DEKAMOND ENGINEERING COMPANY**, your concerns about the quality of the job and workmanship of your facility are eliminated.

LIAN TUNNEL DEKAMOND ENGINEERING COMPANY has worked hard to earn a reputation for quality work and integrity in dealing with clients. We believe in building value into relationships by using quality people and job. Our goal is to develop long lasting relationships based on trust, honesty and professionalism. We work hard to earn your satisfaction and respect because we want to build for you again.

LIAN TUNNEL DEKAMOND TEAM

Lian Tunnel Dekamond team have over the 10 years experience into a highly adaptable construction organization with a proven capability to tackle the most difficult underground inside and international projects.

Our team is successful because our people have the ability and desire to build exciting and challenging projects. Lian tunnel dekamond people possess a drive to excel and a willingness to take on new and unique responsibilities. We have initiative. We explore innovative ideas. We seek better solutions. We are enthusiastic, hardworking and committed to quality and excellence. Our team who started as project engineers, superintendents and foremen are young while their average age was 27 years. Innovation, hard work and integrity. These are the keys to our team's success.

MANAGEMENT

Name: **Abdolnabi Makaber**

Position: **Chief of managing committee**

Age: 52 years

Experiences:

Tunneling Projects

Esfahan Metro EPB $\varnothing=6.8\text{m}$ (Project Manager)

Esfahan Metro south jobsite (Project Manager)

Tabriz Metro EPB $\varnothing=6.8\text{m}$ (Project Manager)

Robat Karim water tunnel NATM (Project Manager)

Bahmanyar water tunnel open-shield $\varnothing=4.85\text{m}$ (Site Manager)

Khayyam water tunnel NATM (Site Manager)

Tehran Metro line 1 and hafte Tir metro station (Site Manager)

Oil & Gas Projects

Khark Island doroud oil operation unit development plan lot 2 (Project Manager)

Siri island desalting plant construction (Technical Manager)

Malko sarkan operation unit construction (Site Manager)

Shiraz chemical dung Factory and petrochemical development project (Site Engineer)

Consulting and research project

Solar cells equipment production and research (Project Manager)

Combustion material control factory construction (Project Manager)

MDF Factory construction (Project Manager)

Iran silos mechanization project (Project Manager)

Tabas coal project (Project Manager)

Experiences: 30 Years

Education: Civil Engineer



Name: **Bahman Nazari**

Position: **Managing Director**

Age: 35 Years

Experiences:

Tehran metro line 3 EPB $\varnothing=9.2\text{ m}$ (TBM Manager)

Aleppo Irrigation Tunnel Hard rock $\varnothing=5.3\text{m}$ (TBM Manager)

Esfahan Metro EPB $\varnothing=6.8\text{m}$ (Head of E&I unit)

South pars quarter platform (E&I construction and commissioning in charge)

Education: Electronic Engineer (Trained in the whole systems of TBM such as mechanical, hydraulic, VMT ... in the Germany Herrenknecht factory- Familiar with PLC Software)

Experience: 10 years



MANAGEMENT

Name: **Mohammad Salarvand**

Position: **Member of Managing Committee**

Age: 27 Years

Experiences:

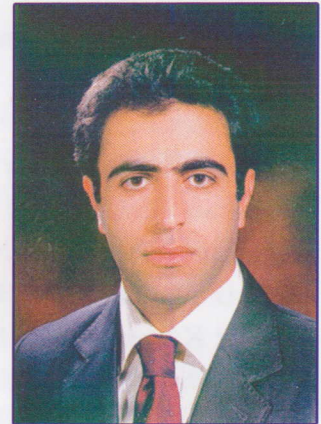
Tehran metro line 3 EPB $\varnothing=9.2$ m (Head of Hydraulic unit)

India-Veligonda Water tunnel Double shield Hard Rock
 $\varnothing=2.3$ m (TBM Operator)

Aleppo Irrigation Tunnel Hard rock $\varnothing=5.3$ m
(Hydraulic technician & TBM operator)

Karaj Water Conveyance Tunnel Hard Rock $\varnothing=4.665$ m
(TBM Hydraulic Technician)

Tunnel Ghomroud LOT5 Hard Rock $\varnothing=4.58$ m (TBM Hydraulic Technician)



Education:

Mechanic Engineer (Professional in the TBM Hydraulic and
Mechanic works-Trained in the whole systems of TBM such as
Mechanical, Hydraulic, Electrical, and VMT ...
in the Germany Herrenknecht factory)
and Hydraulic course in the Parker Company.

Experience: 7 years



Name: **Ali Reza Majdabadi**

Position: **Company Representative in Japan**

Age: 42 Years

Experiences:

Kerman-Sarakhas (Sandblast Project Manager)

Silk Road Trading Co. managing director

Familiar with international trading rules

Trading in fields related to construction and industrial equipments:
such as Tile, Pumps,..

Seller of all types of valves in the oil and gas and water fields.

Seller of all types of TBMs (Tunnel Boring Machines)

and Jet Fans in the Tunneling and construction fields

and other related machineries.



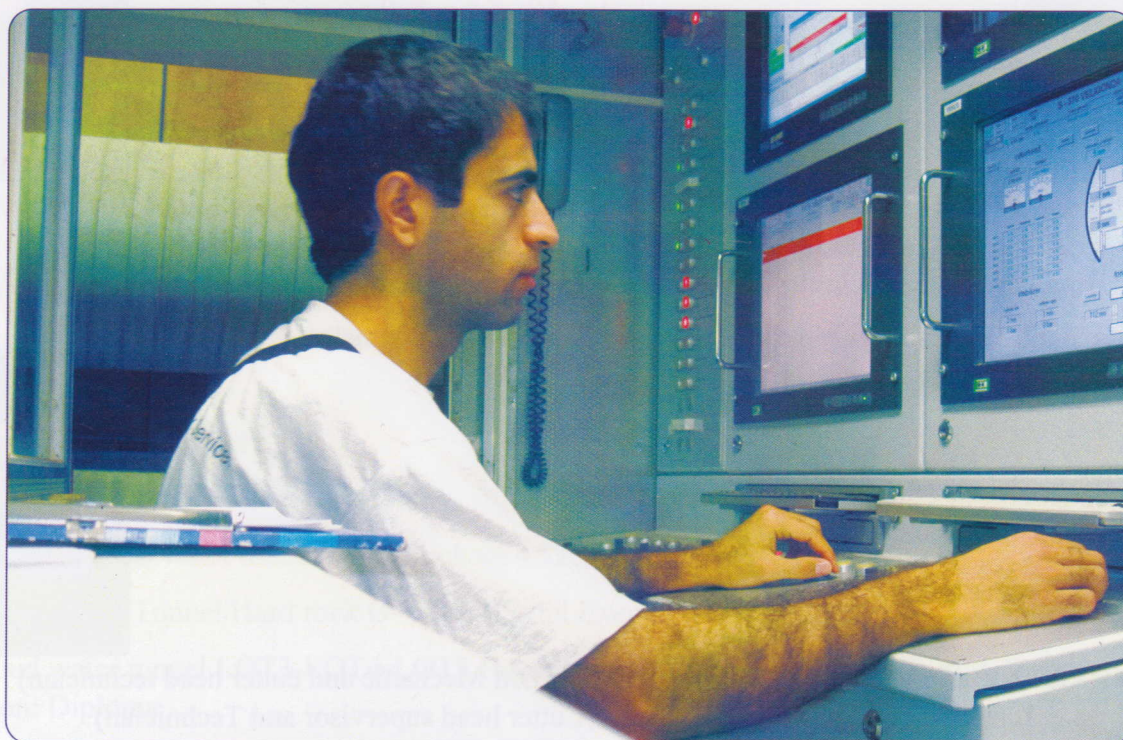
MANAGEMENT OF TBM CONSTRUCTION:

The most important issue in the tunnel projects to increase of economic efficiency is including that have been considered as a high priority by lian tunnel dekamond:

- 1- Ground analysis and make proper decision.
- 2- Proper Planning and analyzing of delays causes and reduce of them to get speed work up.
- 3- Proper management such as optimum manpower and equipment utilization, working cycle control.
- 4- Perfect maintenance for hydraulic and electrical systems and managing of maintenance programs in advance.

TBM OPERATION AND MAINTENANCE:

In spite of good maintenance to get high efficiency of TBM operation other important issue is operate TBM correctly according to soil condition.



TBM maintenance is one of the most crucial measures to avoid or minimize the mechanical and electrical breakdown and keep availability rate of TBM.

The TBM maintenance is mainly split into a daily, weekly, monthly checklist and to be checked by well specialists with their signature after checking is done.

INQUIRY OF SPARE, WEAR AND CONSUMABLE PARTS:

Another issue in the tunnel projects is TBM parts management and controls their cycle. Lian tunnel dekamond is proud can set-up a suitable economic list for all of parts which that has influential role on economic issues on the project.

CONCLUSION:

It is definitely necessary to have an experienced and skillful team with a good management and maintenance system to build a tunnel successfully and safely. In this regard we are gaining more experience in managing and operating a modern mechanized tunneling system to enhance our ability to cope with those difficult ground conditions that might be frequently encountered in the future tunneling projects. We would like to share our passed experiences and ability as are below:

- 1- TBM management especially in the difficult situations.
- 2- Cutting tools inspection, changing and repair
- 3- Maintenance works on mechanical, hydraulic and electrical systems
- 4- Preparing spare parts list depends on diameter and length of tunnel
- 5- Operation of TBM
- 6- Assembling and disassembling of TBM
- 7- Overhaul of TBM
- 8- Design, Calculation and installing of main power distribution of TBM
- 9- Maintenance interval of rolling stock
- 10- Work under work under hyperbaric compressed air work in TBM (Hyperbaric)



It is hoped that the experience presented in the mentioned papers could be of help to similar projects in the future.

