

# **Roxara Engineering LLC**

Engineered Project Management & Trade International

**ROXARA ENGINEERING**  
**Group Portfolio**

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## ABOUT US

Established in 2007, Roxara is a dynamic and energetic team where our charter is to provide turnkey engineering solutions representing the cold chain industries (chilling and freezing technologies) and the food processing industries to potential overseas clients across the globe. Our professional activities are concentrated in overseas markets particularly the Middle East, Africa, CIS and sub-continent Asian countries.

As an internationally experienced design/build team we cater to various industry disciplines, be it consulting engineers, mechanical contractors, developers and manufacturers. We respond to a growing demand for energy efficient, high performance quality systems and strive to aide to relevant local laws and regulations.

We ensure our installers and contractors execute their responsibilities thru OSHA, PSM, RMP, and EPA's trained crews, strictly following the WPS/PQR requirement in their welding works.

To keep up to date with the latest trends, our directors are proud members of the following industry associations:

- Life member - ASHRAE (USA)
- Life member - IIR (France)
- Senior member – IIAR (USA)
- Charter member – ASME (USA)
- Senior member – NFA (USA)
- Member ASHRAE Houston Chapter

## OUR WORK TECHNIQUE

From inception our installation procedures and regulatory compliance towards safety and set up on reducing material usage, presenting local co-systems, low environment impact resources efficient materials, maximize durability and adoptability, integrate cost-analysis into a viable energy savings automatic system and proposing solutions with lower foot print.

The success of our operators is our unique culture on work ethics and stems out on the in comprehensive total solution in the cold chain industry and food processing fields.

Our key goal is to always work hand-in-hand as committed partners in project leadership with our consultants, building client relationship where the needs becomes our priorities particularly in the following fields:

- Agro-Industrial Systems
- Modern Food Technology, representing processing packaging including machineries for Fruits, Vegetables, Dry milk, Dairy Snacks and other nutritious low carb food products. Also including are the refrigeration system for Marine Food, Snack & Dairy Food .
- Industrial NH<sub>3</sub> & HFC purpose built, built-to-order Refrigerating Systems.
- Industrial Ice generation plant, Flaked, Tube & Block Ice Management
- Rapid freezing thru blast freezing, IQF, Freeze Drying, Cryogenic & Carton Freezing
- Industrial HVAC & Process Industrial Chillers
- Refrigeration System for containerized Concrete Cooling Plants, for Cattle & Poultry Slaughter houses, for ULO & Control Atmosphere System
- Cascade Industrial Refrigeration using NH<sub>3</sub>/CO<sub>2</sub> system
- Modern Drying Technology for food, pharmaceutical and chemical industries
- Clean Room Air Conditioning System including Provision of Validation

## **SERVICES RENDERED**

To enhance and speed up our distinguished clients ROI to the bottom line footprints, we design, select, quote and sell world class EU/US suppliers engineered systems covering following applications:

- Multi-purpose Cold Storage Facilities (Fruits & Vegetables)
- Controlled Atmosphere & Fruit Ripening Systems
- Multi-Discipline Freezing Systems
- Fisheries & Marine food products
- Industrial Cattle & Poultry Slaughter houses
- Dairy Plant & Ice Cream Factories
- Containerized Ice generation plant
- API-approved HVAC & Industrial Refrigeration System
- Containerized Concrete cooling for Batch plant
- Relevant Electrical, lighting, Automation & wireless Cloud Computing Controls
- PLC operated & SCADA monitoring Systems
- Supervision on System installation, commissioning & Start-up and plant hand-over to client
- Hands-on Training & knowledge transfer to client's assigned personal
- Outsourcing Scheduled preventive and predictive maintenance including trouble shooting per manufactures' instruction

## **WHY SELECT ROXARA?**

- Roxara proposes best in our ability to provide our customers flexible solutions that our engineered, designed and delivered to exacting customer expectations
- Roxara gets committed to customer with a simple handshake
- Roxara Listens and identifies with customer needs and shares it accumulated knowledge with them
- Roxara handles awarded projects intelligently, efficiently and profitably – with timeline and budget
- Roxara delivers its capabilities on relevant industry technologies from concept to commissioning

- Roxara offers total solutions on hazardous and/or non-hazardous environments
- Roxara works diligently to safeguard customers investment, assuring best results on ROI
- Roxara is customer oriented and its work Axiom is to always remain on “ our valuable customer’s side”.
- Roxara’s goals are to apply “Changes for the better”



## CREENTIALS

**NAME:** Manuchehr Mehdizadeh - Group Leader

**EXPERIENCE:** Results oriented professional with extensive background in designing, sourcing and implementing HVAC, industrial refrigeration, food processing plants, people and organizations. Unique blend of technical knowledge and interpersonal skills. Strong focus on customer interface for business development, contract negotiations and product timeline delivery. Also extending invaluable international management experience with specific expertise in: Operations Management, Contract Development/Negotiations, and International Business Strategy.

Former Managing Director & part owner of renowned Techno Frigo Corp, (Tehran) an engineering Iranian contracting company , by far the largest in the HVAC&R field, focused on multi million dollars at EPC level on electro-mechanical projects ranging from complex HVAC designs to comprehensive electrical and elevators , steam system, power generation and renewable energy systems for high occupancy industrial and commercial medical , academic institutions , extensively covering the entire line of Cold Chain Industry including chilling & freezing technology.

**LAST POSITION HELD:** Director Systems Engineering where I worked as subject matter expert and senior advisor with leading Iranian Manufacturer's in Heat Transfer and Industrial Refrigeration from April 1995 thru May 2009.

In summary, Mr. Mehdizadeh's accumulated knowledge and international expertise is focused on Cold Chain Industries particularly the Electro-Mechanical field of HVAC & Industrial Refrigeration (Freezing/Chilling) and Food Technology including Processing & Packaging systems, mainly collaborating with developers, manufacturers and contracting engineering companies.

**PERSONAL BIO:** Mechanical Engineer (Class of 64) graduate of University of Buffalo, NY, actively involved in community projects and giving back. Currently residing in Houston, TX.

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**INDUSTRIAL ACTIVITY:** Technical author of numerous white papers on relevant refrigeration industries, food safety etc. – in English & Farsi language. Membership in following Trade Organizations:

- LIFE MEMBERSHIP ASHRAE (USA)
- IIR (International Institute of Refrigeration - France)
- ASME (American Society of Mechanical Engineer (USA))
- IIAR (International Institute of Ammonia Refrigeration)
- ISME (Iranian Society of Mechanical Engineers - IRAN)
- NFPA National Fire Protection Agency)

**STANDARDS:** Prepared relevant internationally oriented Codes & Standards in HVAC&R for Iran's NIOC, including those called for by Charter of Safety, Health & Environment Management.

**TEAM LEADER:** Prepared & submitted a total of 21 sets on HVAC & Industrial Refrigeration internationally oriented sustainable **Standards & Codes** initialed as IPS (Iranian Petroleum Standards) for OIEC Consulting Group where, National Iranian Oil Company (NIOC) were the customer. Presently over two decades these yearly updated standards are applied on all Oil & Gas tenders of Iranian International/National Bids.

### **PARTIAL CAPABILITIES & RENDERED SERVICES:**

- Leadership skills with internationally oriented "Thought & Knowledge Management" concept rendering cost effective energy management programs for commercial, industrial & OGP applications.
- Management level Supervision for design, installation and start up for heat transfer projects, particularly HVAC and Cold Store & freezing/chilling trades plus Food Technology including Processing & Packaging System & Machineries, etc.
- Thru proper Vendor Management locate suitable and world class local & overseas manufacturers, suppliers, engineers etc.
- Communicate with dignified Customers, Sub-contractors, and Vendors through correspondence, meetings, and negotiate deals etc.
- Provide following approach on hybrid fast-track arrangements through friendly coordinated teamwork: Pre-contract and Tender, Co-ordination of Services. Post contract Monitoring, Stand Alone Services

- Compile and prepare in English Language Portfolio/ System Overview and Feasibility Report including Cost Benefit Analysis on diversified Industries.

## PROJECTS – DESIGNED & MANAGED

A partial list of some of the projects designed as consultants and submitted to the following international developers and entrepreneurs:

### IRAN, Islamic Republic of:

#### Seiraf Boroudat Co. - Bushehr FTZ

##### **(Mr. Saeed Ahmadi, Managing Director)**

A subsidiary of the diversified Mobarak Industrial Group (MIG) establishing a seafood processing with freezing/chilling cold store capacity 14000 tons with 40 chambers incorporating modern technology central ammonia refrigeration system mainly for seafood applications. The system incorporates screw compressor package with centralized PLC and SCADA monitoring system.

#### Rasis Arman Agro-Industrial Complex - Mashhad

##### **(Ms Azam Ghaffarnia, Managing Director)**

Multi-purpose fruits, berries and vegetable processing and packaging plant at 5 ton/hr capacity. It also includes 2 ton/hr IQF Freezing unit and six freezing chambers for 1500 ton multi-purpose cold store plant.

#### Tecnokit Co. - Esfahan

##### **(Mr. Mohammad Khonsari, Managing Director)**

Collaboration with an OEM Chinese manufacturer designing a production line for producing split air conditioning DX units from 12000 to 32000 Btuh capacity producing 25,000 Sets fully assembled units per year. The air conditioners are to be imported CKD/SKD and our added responsibility was to employ and train group of skilled and unskilled workforce.



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### Agro-Industrial Co. of Hayva Gol - Qaemshahr

**(Mr. Javad Tavvaby, Managing Director)**

Vegetable and food processing and packaging plant for annual fruits/vegetable freezing capacity of 12000 ton, and 900 ton for modern fluidized bed drying capacity. This site also involved a 2.5 ton/hr IQF unit, and 2 ton/hr process drying system with a 800 ton capacity freezing chambers at -20°C storage temp.

### Sherkate Chand Manzooreh Abzee Gostaran - Esfahan

**(Mr. Sadequi, Managing Director)**

Trout fish farming project called for a 20 ton/day blast freezing, 250 ton freezing chambers, two 10 station plate freezers and one IQF freezer unit to capacity 500 kg/h including a 2.5 cubic meters/hr ice bank unit together with full line fish packaging and fish processing machineries.

### Shourka Tuna Fish Factory - Bushehr

**(Mr. Watandoost , Managing Director)**

Tuna fish processing factory for daily production of 450,000 cans (easy open) each weighing 180 grams tuna. This project called for 50 ton/day freezing tunnel and 1000 tons freezing chambers and about 1000 Ton of Refrigeration for Space Air Conditioning. A Fish processing/packaging system with a 2 ton/h IQF unit was also established.

### Affarid Tuna Fish Factory - Bushehr

**(Mr. Watandoost , Managing Director)**

Tuna factory where the existing refrigeration piston compressors and the high side equipment were replaced by increasing the number of freezing chambers and its storage capacity, and increasing the quantity of packaged screw compressors from 3 to 5 Sets with relevant ancillary items.

### Daryacheh Tar Agro Industrial Co. - Damavand

**(Mr. Khanbodaghee , Managing Director)**

French Fries Processing Plant and an IQF freezing factory with a trade name of MAC wherein the refrigeration capacity of its existing IQF unit modified to 3 ton/hr and a new 1000 ton cold store for -20°C room temp designed and installed. In addition submitted for two new belts on snacks, a Potato based Pellet and a Duchess/Croquettes

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processing/packaging plant @ 350 kg/h capacity to be established as per capital availability.

### PAKISTAN

#### BIFS/BOML Logistics Co, West Wharf, Karachi, Pakistan

(Mr. Tariq Rangoonwala, Managing Director)

As a Consultant & Project Management group, designed a multi-purpose dual-circuit ammonia cold store Temp Controlled Warehouse handling approx 3000 pallets. Supervised the complete purchase and supervision on the entire scope of supply including the fabrication of pressure vessels from leading GEA group located in Sharjah, (UAE). This cold store complex was commissioned early 2012.

### SUDAN

#### Abu Khreis ICE Plant & Cold Store Company, Khartoum

(Mr. MohammadAli Shummo President)

A custom designed the of NH3 Block Ice Plant producing 40 Ton of Ice Daily complete with its build-to-order refrigerating system suitable for flooded operation and operating two-shifts a day. This project was commissioned during mid-2003.

### PERSIAN GULF LITTEROL STATES of Dubai & Qatar including Iraq

As design engineers on advisory (consulting) level for industrial refrigeration for the following Temperature Controlled Warehouse (TCW) projects, Mr. Mehdizadeh entered into a Teaming Agreement with the following prospects or their representative:

#### EKFC (Dubai)

Expedited during 2015, teaming jointly with a leading consultant from East Europe (Mr. Vladimir Dimitrov. MD of Refcold Ltd – Sofia Bulgaria). This project was designed for an ARTEC Architects Engineering Consultants located at Deira-Dubai for the project Emirates Kitchen Food Center. This project represented the following temp controlled rooms including the relevant marshalling areas, devoid ceiling space, a hallway and plant room. It represented total freezer space of 21500 cubic meters for a multi-purpose multi-circuit cold store facility for 5000 Product Ton at a holding temp of -20C storing various kind of fresh & packed, cut & whole food products

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### ZAD HOLDINGS (Doha - Qatar)

A two-storey multi-circuit purpose-built cold store project for APG Architecture & Planning Group. This cold store was designed with ammonia refrigerant, although seemed not an accepted concept for use in Qatar, as they prefer to use HFC gas.

### QIMC (Doha-Qatar at Aba Sellal Industrial Area)

This interesting project whose Principal is Qatar Industrial Manufacturing Co (QIMC Logistics), was designed for subsidiary of Al-Ta'adhod Group Gree-Qatar for budgeting purposes :

Its proposed refrigeration system encompassed following data for both packaged food products and fresh products:

- Freezers (8 rooms) total at approx. 22,040 M3 space to be maintained at -25C, assuming that in-feed food products may enter at -15C & Te= -33C, storing for example protein items and ice cream.
- Chillers (4 rooms) total at approx. 6752 M3 space to be maintained at 0C/+4C, assuming that in-feed food products may enter at +15C & Te= -8C, storing for example fruits & vegetables (on short term storage, for instance, bananas at +14C, melons at +3C - most fruits & vegies need close temperature control to avoid spoilage), Tamarind, Dates (non-syrup), dairy products etc.
- General Cold Store (12 rooms) total at approx. 9840 M3 space to be maintained at +4C/+10C, assuming that in-feed food products may enter at +20C, storing for example nuts, dry milk, chocolates, canned fruits, perhaps Rx Pharma etc.
- Loading Bay & Marshaling area to be maintained at +5C
- Hallway (Corridor) total space 7128 M3 to be maintained at +8C/+10C
- Plant Room to be maintained at +26C/+28C

### HAYEL (Doha- Qatar)

The architect for this project is Gulf Engineering & Industrial Consultancy for UMM-Shahrain representing multi-purpose multi-circuit Temp Controlled Warehouse & Offices representing both Commercial Refrigeration using HFC R404a refrigerant and Packaged Air Conditioning System. Prepared and submitted its Design/Proposal of this project was done in coordination with leading company Hill Phoenix of Conyers, Ga (USA)

**Cooler Chambers**— 32 Rooms; approx. 8125 m3 each; 0°C/+4°C holding temp; +46°C ambient

Equipment Specs:

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- Hillphoenix HFC DX parallel Rack System, R404A, 415/50/3
- Bitzer Open Screw compressors
- Bohn/Heatcraft Evaporators with Hot Gas Defrost
- Bohn/Heatcraft VSEC Series Condensers (variable speed EC motors)
- Emerson E2 Refrigeration Control System

**Freezer Chambers** – 16 Rooms; approx. 10634 m3 each; -20°C holding temp; +46° C ambient

Equipment Specs:

- Hillphoenix HFC DX parallel Rack System, R404A, 415/50/3
- Bitzer Open Screw compressors
- Bohn/Heatcraft Evaporators with Hot Gas Defrost
- Bohn/Heatcraft VSEC Series Condensers (variable speed EC motors) Emerson E2 RX-300 Refrigeration Control System

### KARBALA - IRAQ

This multi-purpose dual circuit cold store facility was requested for a leading Iraqi Developer Mr. B.Rahimi, where a typical land plot layout was furnished by them. The proposed refrigeration system was able to encompass following temperatures for both packaged products and fresh fruits & vegetables:

- Freezers (4) total at approx. 41,000 M3 space to be maintained at -25C/-27C, Food Products entering at -14C & Te= -33C, suitable for storing protein items and ice cream Chillers (4) total at approx. 41,000 M3 space to be maintained at 0C/+4C ,
- Food Products entering at +15C & Te= -6C, suitable for storing fruits & vegetables (on short term storage, for instance , bananas at 14C , melons at 3C - most fruits need close temperature control to avoid spoilage) , Tamarind, Dates (non-syrup), dairy products etc.
- Dry Store ( Warehouse) at approx. 15,000 M3 space to be maintained at +25C , Food Products entering at +35C , suitable for storing nuts , dry milk , chocolates, canned fruits , Rx Pharma.
- Loading Bay & Marshalling Area to be maintained at +5C
- Hallway to be maintained at +8C/+10C
- Offices & Admin area to be maintained at +22C/+24C
- Plant Room to be maintained at +27C/+30C

## JOINT VENTURE PROJECTS

During Mr. Mehdizadeh's over 20 year's tenure with Techno Frigo Corp (TFC), as the liaison supervising officer for TFC on 'joint venture projects' with the following big engineered contracting companies of global repute:

Foreign Companies	Country	Year	Scope of Job
Stone & Webster (Main Contractors)	England	1973	HVAC and Control System for Razi (formerly Shahpur) Petrochemical in Southern Port, Bandar Khomeini
Bouygues (Project Management)	France	1974	Procurement and Execution of a CPM for HVAC installation schedule for Azadi (formerly Aryamehr) Sports Center in Tehran. This site represented the 1974 Asian Olympic Games Complex where over 6000 TR of YORK Ice Rink & HVAC Absorption Machines were installed
Mitsubishi Heavy Industries (Main Contractors)	Japan	1975	HVAC and Control System for D.O.P Plant for Iran Nippon Petrochemical Co. in Southern Port Bandar Khomeini
Starret Co. (Main Contractors)	USA	1976	HVAC System with Packaged YORK Triton DX units for year-round air conditioning, representing total four condo hi-rises 900 apartment units for the Shahgoli Housing Condominiums in Western Tehran - Shahrake Gharb Site
Kumagai Guma (Main Contractors)	Japan	1977	Passenger Elevators (4 Sets) for an 80 unit apartment complex of the Soviet Embassy Housing for their staff in Tehran on Ave Hafez

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Bert Clausen & Associates (Project Management)	USA	1977	3500 product ton Ziaran Industrial Cattle Slaughter house Cold Stores and Freezing Complex on EPC basis, approx 120 km from Tehran
Syska & Hennesey (Consulting Managers)	USA	1978	Central HVAC Plant Room 600 TR cooling capacity and one km grade piping for Tehran American School in Lavizan
Snam Progetti (Main Contractors)	Italy	1979	Completion and trouble shooting of HVAC and Instrumentation & Controls for their sites at Ghom and Isfahan Gas Reducing Stations owned by National Iranian Oil Co.



## INTERNATIONAL PLANT TOURS

### USA

Company	Location	Year
KOHLER: Manufacturers of plumbing fixtures, stand-by generators & sanitary works.	Kohler, WI	1971
BLAZER: Manufacturers of computer room air conditioning equipment	Rutherford, NJ	1971
FRICK CO: Industrial refrigeration equipment manufacturers for cold store, freezing and heat transfer. Training: 2 months	Waynesboro, PA	1974, 1979-80- 81-85
YORK HOLDING INTERNATIONAL: Largest Central HVAC equipment manufacturers Training: 2 week	York, PA	1976, 80-81-85
WESTINGHOUSE: Manufacturers of geared and gearless elevators	Union City, NJ	1976-77
SARCO: Manufacturers of steam line specialties	Allentown, PA	1979
JAMISON: Manufacturers of refrigeration doors for industrial cold stores	Hagerstown, MD	1979
AURORA PUMPS: Biggest US pump manufacturers for various applications Training period : 5 days	Aurora, ILL	1979
CLYCLOTHERM BOILERS: manufacturers of hot water steam boilers upto 1000 BHP Training period : 2 days	Owego, NY	1979
KRACK CORP: Manufacturers of refrigeration air coolers for cold stores and freezing plant Training: 2 days	Addison, Ill	1981

**EUROPE**

<b>Company</b>	<b>Location</b>	<b>Year</b>
KONE: Manufacturers of elevators, escalators and dumbwaiters up to 10 ton capacity	Paris, France	1980-81
YORK: Largest manufacturers of central HVAC and refrigeration equipment	Sussex, England	1980-81
TECHNO FRIGO EUROPA: Manufacturers of industrial refrigeration cold store freezing and ice plant plus sandwich P.U. panels	Bologna, Italy	1980,81 &1985
SERSEG – SCHLUMBERGER: Manufacturers of valves, strainers and pipeline specialties	Nancy, France	1981
SPRECHER AND SCHUH: Manufacturers of relay-based electrical components such as connectors, relays, starters, and similar items	Aarau, Switzerland	1981
KOEHLER BOSSHARDT: Manufacturers of water and fire tubes, steam boilers, low and high-pressure boilers up to 3000 BHP	Basel, Switzerland	1981
SPIRAX-SARCO: Manufacturers of steamline specialties	Cheetenham, England	1978-85
MYCOM EUROPE: Manufacturers of Refrigeration Screw & Piston Compressors	Zaventem, Belgium	1995 &1997
FRIGOSCANDIA EQUIPMENT: Leading manufacturers of IQF Freezers and Food Technology Machineries	Helsingborg, Sweden	1975 &1995
MTH: Worlds largest manufacturers of various refrigerated & controlled atmosphere PU-insulated doors with its hardware	Almese (Torino), Italy	2004



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### JAPAN

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Company	Location	Year
MITSUBISHI/MELCO: Manufacturers of elevators, dumbwaiters, escalators, up to ten ton capacity Training period : 2 weeks	Tokyo, Japan	1976

### CHINA

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Company	Location	Year
SHINING (DEER): Leading manufacturer of split and window A/C DX air conditioners	Taizhou, P.R.C	2004

### UAE

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Company	Location	Year
SKM AIRCONDITIONING: Manufacturers of HVAC and heat transfer related systems	Sharjah, UAE	1993-1997 1999-2002- 2002-2006
TECHNICAL SUPPLIES CO: Manufacturers of Polyurethane Sandwich Panels and Refrigeration Doors	Sharjah, UAE	2008 - 2002-2004

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#### NOTE:

Other international Plant Tour & Visits from 2008 onward not mentioned

## EXECUTED MULTI PURPOSE PROJECTS

### NIK BROODATI & HARARATI CO.

(Distributors of MYCOM Compressors) & Zeil Abegg Air Cooler Fans

Tehran – Iran (April 1995-May 2001)

With NIK B & H Co. on executive consulting level on full time contract basis handling engineering & sales primarily in Heat Transfer System Industrial Refrigeration (Cold Storage Chilling & Freezing Systems & Ice Block Plant) & related engineered fields. During this period I managed to increase sales to a sizeable level and secured the agency of MYCOM compressors, ZIEL ABEGG Cooler Fans and ISO 9001- 2000 version for the company. Some of the interesting projects designed & executed being:

#### KESHT-O-SANAT SHOMAL SARI (North Iran)

A leading vegetable food oil processors & packers. The ammonia cold store design was unique requiring to cool and phase change of 450 ton (daily mfg capacity) of 50°C hot liquid oil in 12 hours. This project represented three 8 cylinder MYCOM Compressors at 0°C suction for a total cooling capacity of 1800 KWR. This project commissioned during July 1998.

#### BEHPOODR DRY (POWDERED) MILK MFG CO. (Esfahan – Iran)

This project required to cool cheese water through -1°C Ice Bank System with one ammonia compressor at Minus 10°C suction cooling capacity 365 KWR. This project commissioned during Sept 1997.

#### SAHAR DAIRY PROCESSING CO. (Qazvin – Iran)

This project required to cool from 35°C to 4°C 100 ton per day milk (in 5 hrs) which was to process various Dairy milk products such as cheese, cream, whey, butter, etc. Ice water through -1°C ice bank system to total storage capacity of 2 million Kcal/h. With two MYCOM Ammonia Compressors, at total cooling capacity 800 KWR. This project commissioned during Feb 1997.

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### TOOS COPPER PRODUCTION CO. (Meshed– Iran)

This project required to cool 720 cubic meters of industrial water from 48°C to 30°C through banks of closed circuit fluid cooling tower units. This project commissioned during July 1996.

### PAR-RIZAN PROTEIN FREEZING & COLD STORES (Boroojerd – Iran)

This site represents 3 MYCOM piston compressors with a capacity for freezing tunnel 10 ton/day plus a pre cool chamber and a 400 ton freezing chamber. This project commissioned during Nov.1996.

In brief, other partial list of freezing/chilling cold store projects are as follows:

- 5000 Ton Fruits & Vegetable for Milad Cold Stores (Damavand – Iran)
- 5000 Ton Gilan-Sard Co., General Cold Stores & Freezing (Rasht– Iran).
- In addition various design/build projects representing General chilling/freezing stores in many locations across the country

### **TECHNO FRIGO CORP (TFC)**

**(Distributors of York/Frick HVAC & Westinghouse & MELCO Elevators & others)**

**Tehran – Iran (May 1971 - May 1991)**

Mr. Mehdizadeh's employment with TFC began as a senior design and estimating engineer, submitting all kinds of design/build proposals on central year-round air conditioning plus commercial/industrial refrigerating systems , including elevators works & other electro-mechanical trades. Although work was performed at numerous projects while at the post, the venture at the Aryamehr Sports Center (jobsite of 1974 Tehran Asian Olympic Games) in Tehran was one of the more prestigious ones. As an engineer in charge of material take off for the entire round-the-year air conditioning system, ventilation, gas piping, swimming pool filtration, skating rink, grade piping and outdoor sprinkler system. This multi-task project required the team to search, place and pursue orders of up to US\$ 3 million with EU/US manufacturers. Among other responsibilities in this project, was advising and coordinating the duties of different site engineers and coordinating them with Bouyeye of France for the preparation of the Critical Path Method (CPM) for Schedule of Installation progress. The consultant on this project was Skidmore Owings & Moore of USA and A.A Farmanfarmanian of Iran – executed 1973-74.

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At 12-story Tehran Telecommunication Center (Toopkhooneh), Mr. Mehdizadeh's team were the manager for design, installation and launching of PARKER (USA) Pneumatic Tube dispatch system. This new system technology consisted of 2.25", 4" and 10" pre-designed PVC tubing circuits, turbo exhauster, carrier sets, and up and down delivery dispatch sets. These circuits were arranged for transferring initiation forms, debit vouchers, phone bills, etc. from dispatchers to various floors. The consultant on the Project was IMEC of England – executed 1975.

As project manager at the Shahpasand Factory Project representing the large diversified Behshahr Industrial Group located in Tehran. Here, Mr. Mehdizadeh took the task of design, installation and implementatin of 2 sets MELCO (Japan) Freight Elevators each with a loading capacity of 4 tons – executed 1976.

Also for Shahpasand Factory as Team Leader executed the design/build on eight different Frick (USA) ammonia industrial cold storage plants, designed for general food storage and vegetable oil storage (phase change process) ranging from 300 to 8000 tons at +1°C to -3°C chamber temperature. The compressors were operated with heavy duty FRICK reciprocating industrial type – executed 1974- 1979.

As the lead project manager for Ziaran Meat Processing and Packaging Industrial Slaughterhouse, supervised the design, sales, installation and start-up of a 3500 ton automatic built-to-order Frick industrial ammonia cold storage plant. The consultant on this project was Bert Clausen of USA. The daily slaughter capabilities were 150 cattle and 1500 sheep - executed during 1977.

At the Tehran American School, Mr. Mehdizadeh was in charge for the as-built shop drawings and procuring equipment for the main central heating and air conditioning plant room. The finished project consisted of 2 York absorption water chillers each with 500 TR, 2 Cyclotherm hot water boilers 300 BHP, and 12 Aurora centrifugal hot water pumps, 2 BAC cooling towers and 1 km of grade piping. The consultant on this project was Syska Hennesey of USA – executed 1978 – 1979.

As the associate to the site supervisor for the Dehkadeh Housing Olympic Village Project, Mr. Mehdizadeh oversaw the installation of water tube hot water boilers each 600 BHP 3 KOEHLER units, 12 Centrifugal hot water pumps,

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and relevant piping, distinct heating. The consultant on this project was Tasis of Iran – executed during 1973-4.

At the Iranian National Radio and Television (NIRTV Channel 7 Tehran) project, the team set up 3 hot water KOEHLER boilers 400 BHP capacity 5 YORK combination Absorption Centrifugal water chillers total capacity 1200 TR. The consultants on this project were Quanta of Iran – executed during 1977.

A similar project with above specifications was also undertaken by the team at the Farahabad Race Course and consultants were from Hong Kong – executed 1978.

The project at the Ministry of Interior Building on Dr. Fatemi Ave, Tehran to which as the senior coordinator, Mr. Mehdizadeh coordinated another big project involving installation of entire HVAC, Electrification, Elevators and relevant electro-mechanical ancillary works. The imported equipment from USA and Europe under supervision of Mr. Mehdizadeh alone had a net value of US\$ 2 million. The consultant to this project was Nassa-Interco of Iran – executed 1981.

As the Project Manager for the Tehran Pars Cold Store Complex, Mr. Mehdizadeh led the team that was responsible for the design, installation and start-up of the 3500 tons cold storage and freezing plant. This project had a net value of US\$ 2.15 million for the imported dual refrigerant refrigeration circuit operating with R22 & Calcium Chloride Brine as a secondary media. The custom built refrigerating system & equipment was procured from FRICK. The consultant on this project was Sodetec of France and Seif Etude of Iran – partial execution 1979 - 1986.

The Wagon Sazi Factory (manufacturing of National Railway Locomotives & Wagons) for the Ministry of Heavy Industries in provincial city of Arak – required for Iran State Railway Company) was one of the team's more interesting and challenging projects due to its diversity. Mr. Mehdizadeh was in charge of material take-off for the factory's building electro-mechanical affiliated jobs, representing various electro mechanical and industrial trades. Most of the imported equipment for this prestigious project was from European suppliers mainly from Austria supported by many locally engineered & fabricated contents. The consultants on the project were Simmering-Graz-Pauker of Austria, and Bonyan of Iran as coordinator – executed 1978 – 1983.

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## Engineered Project Management & Trade International

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The Ekbatan Housing Complex (Phase 2) located near Tehran Airport representing 20 blocks, each block 12 stories; each block comprising Two sets of CARRIER Centrifugal Chillers , 2 sets of CLEAVER BROOKS HW Boilers and 2 sets BAC Cooling Towers which were already mounted in-place by the developer in the basement plant room (MER) and on the roof of each block. Also each block represented about 310 apartment units of 1-bed, 2-bed and 3-bedroom size. During Mr. Mehdizadeh's tenure as Managing Director he personally coordinated the building's entire pipe insulation & piping installation, including over 30000 fan coil units (where 13000 units were installed in-place), over 300 Air Handling Units (where 135 units were installed in-place) and complete controls and installation. In all eight of the 20 big Mechanical Equipment Room (MER) including commissioning and start-up were completed and handed over where new tenants were seen pouring in – executed (during Mr. Mehdizadeh's MD tenure) between 1985 – 1989.

### Positions Held at Techno Frigo Company

During tenure of Mr. Mehdizadeh at Techno Frigo Corp he held the following positions:

- Senior Design/Estimating Engineer : up to May 1972
- 5% shareholder of the company, June 1975
- Manager Sales & Engineering : June 1975 – June 1988
- 15% shareholder of the company : May 1982
- Chairman of the Board of Directors : July 1982 – June 1984
- Vice Chairman of the Board : July 1984 – June 1985
- Managing Director & CEO : July 1985 – May 1990

During the second quarter of 1992, the company, Techno Frigo Corp was confiscated by the Iranian Revolutionary Organ called "Setade' Farmane' Hazrate' Imam", whereby Mr. Mehdizadeh's shares and assets were impounded and transferred to their name wherein a hefty penalty was also paid as religious tax called "Khoms".

### OIEC (After Techno Frigo Corp)

During mid-1991, on a part time basis, for over a year and a half, Mr. Mehdizadeh engaged with an NIOC affiliated consulting engineer called OIEC (Oil Industries Engineering and Construction Company), where he was their team leader preparing

and compiling 21 Sets of approved heat transfer standards abbreviated IPS “ IRANIAN PETROLEUM STANDARDS “ in English language which was compiled on highly international level covering the Material and Engineering aspects in the fields of HVAC and Industrial Refrigeration (Chilling/Freezing Technologies) describing both Equipment and Materials on Systems.

### **INDEPENDENT CONSULTANCY**

As fully described in Mr. Mehdizadeh’s LINKEDIN Profile , during the period of 1995, Mr. Mehdizadeh simultaneously floated his own consulting company in Iran, called BAZYAB TECHNIQUE GROUP and right until over 18 years later executed a lot of projects on Design/Build Cold Chain Industries while holding the exclusivity in Iran, HOWDEN (UK/Holland) Refrigerating Screw Compressors & JORGENSEN (Denmark) Food Processing & Dry Milk Packaging Industries and few other agencies. During the process he was also Lead Consultant to various HVAC/Refrigeration Manufacturers in Iran , compiling for them Company Portfolio and as SME advising them on company operation method and how to increase profit while creating less industry wastes.

After this period during 2007 , Mr. Mehdizadeh floated ROXARA ENGINEERING LLC , a design/built engineering company, based in Houston ,Tx (USA) specializing in Industrial/Commercial Refrigerating System & Equipment including food , primarily catering for overseas developers & prospects primarily in the Middle East Region , the CIS countries and the Asian Sub-Continent .

### **GENERAL ENGINEERING COMPANY (GEC)**

**Tehran – Iran ( April 1969 - May 1971 )**

Mr. Mehdizadeh’s two years at GEC were progressively spent as project engineer on four major projects.

The first one was the Loghman Dowleh Hospital in Tehran as the site installation engineer. Mr. Mehdizadeh and his team set up the following equipment : steam boilers 150 BHP each, steam reducing station, flash tanks and self contained thermostatic valves for a space and process heating system, complete with piping, fittings, valves and accessories & modern technology control system.

The 25-bed hospital in the northern city of Lahijan was the site of Mr. Mehdizadeh's next project. The plant that we set up in this location was very similar to the hospital in Tehran, except it involved two 100 BHP hi-pressure steam boilers and also installed HONEYWELL electric controls and other pertinent equipment and ancillary works.

The third project was the TV Station in the northern city of Rasht. With the coordination of French contractors were able to install a similar setup like the hospital in Tehran. Due to involvement with other projects travel to Rasht was limited and implementation operations were coordinated from the Tehran office.

Mr. Mehdizadeh's other project at GEC was the Steam Power Generation Station (2x120 MW power capacity) in the city of Manjil which is located between Rasht and Qazvin 100 km from Tehran. Here with the help of leading German contractors the team not only installed the two 400 BHP Continental steam boilers and its expertise items but also completed the entire Packaged Air-cooled HVAC installation.

**SHOLEH KHAVAR COMPANY(SKC)**  
**(Distributors for CARRIER HVAC and OTIS Elevators)**  
**Tehran – Iran (April 1968 – April 1969 )**

Mr. Mehdizadeh's first project at SKC was at the **Mehrabad Iranian Air Force F4 Base** located on South Tehran. As the assistant project coordinator, he was member to a team of 20 engineers, technician, designers and construction workers that supervised installation of the following equipment for the round-the-year HVAC system , with additional supervision by US Army Corp.

- 2 CARRIER absorption chilled water machines with 250 TR each
- 2 CLEAVER BROOKS steam boiler 150 psi 300 bhp
- 8 Centrifugal chilled and hot water pumps
- 2 MARLEY cooling tower induced draft type
- Relevant plant room piping , valves & controls including pipe insulation
- Wiring and cablea with a 1500 Amp Free-standing Main Electric Panel Board



- Controls and instrumentation. (Piping and ducting was done by others)
- Vacuuming & Pressure Test of the system Gas Charging and start-up

The prestigious **Tehran Oil Refinery** was the site of Mr. Mehdizadeh's second project. As assistant to the installation engineer and liaison for Flour Engineers (USA) who were the main contractors, Mr. Mehdizadeh was partially responsible for the installation of explosion proof pneumatic HONEYWELL Controls and preparation of O & M Documentation.

**Vahabzadeh Building (12-story)** on Tehran's Mofattah Avenue (formerly Roosevelt Ave) which later became the Main Office of the National Iranian Gas Company (NIGC) was another big project that I was involved with. As the assistant Site Engineer Mr. Mehdizadeh was in charge of setting up the CARRIER water-cooled reciprocating chillers, Cleaver Brooks Boilers , Marley Induced draft Cooling Tower, B&G end suction centrifugal pumps, Domestic HWT and complete pipe insulation & piping for the entire 12 – storey building. The result was successful TAB procedures and commissioning of Central HVAC equipment and system for a total year-round cooling capacity of 250 TR.

