

FARASAZ

STEEL STRUCTURES

MAY 2016

FIELDS OF ACTIVITY

FARASAZ is active in:

- Shop Drawing, Manufacturing and Erection of Heavy Steel Structures including Residential, Commercial, Industrial, Petrochemical and etc.
- Design, Manufacturing and Erection of Transmission Line (TL) Towers including Lattice and Monopole.
- Design, Manufacturing and Erection of Lighting Poles and similar structures such as flag pole, camera pole, navigation pole, etc.
- Hot dip galvanizing
- Type testing of power transmission towers

REGISTRATION

The two registered companies with name FARASAZ are:

- 1- FARASAZ INDUSTRIAL CO., Reg. No.: 50133-Tehran, known as Farasaz Ind. Co., Founded in 1983.
- 2- FARASAZ CO., Reg. No.: 39220-Tehran, Known as Farasaz Construction Co., Founded in 1980.

The first company (Farasaz Ind.) owns a factory in Mourchekhort industrial area near Isfahan and performs production services for projects and testing of towers, whereas the second company (Farasaz Construction) performs civil works of projects such as foundation construction, erection of structures, wiring of TLs and etc.

FARASAZ FACTORY

The factory is located in Mourchekhort industrial area (Isfahan) in a plot of land 76,000 square meters and production and service halls 16,000 square meters. This factory has following facilities:

- Production lines for steel structures with equipments for cutting, sawing, drilling, welding, machining, bending, punching and etc.
- Sand blasting and painting
- Hot dip galvanizing
- Station for type testing of TL towers

Capacity: 30,000 MT of steel works and 30,000 MT for hot dip galvanizing

Some Features of FARASAZ

- The first private company in Iran designing and manufacturing transmission and telecom towers including lattice and monopole
- The first company in Iran designing and manufacturing polygonal monopole towers as well as poles with slip joint connections (known as telescopic towers)
- The first and only private company in Iran having tower full-scale testing station
- The first company in Iran designing and manufacturing lighting towers with movable basket





FARASAZ COMPANY

FARASAZ GROUP was founded by "*Naghshineh Brothers*" in 1980 by registration Farasaz Construction Co. for civil works. Then, in 1983 they founded Farasaz Factory in Isfahan in order to manufacturing steel structures and registered Farasaz Ind. Co.

In 1992, they founded a factory and related company "Faranoor Afhsan" by purpose of producing lighting projectors. By help of this factory they could provide required projectors for lighting poles, one of main products of Farasaz factory.

In order to developing manufacturing capacity of steel works, in 1995, Niroofaran Factory in Safadasht (near Tehran) was established and related company, Niroofaran, was registered.

In 2001, a Factory and related company by name of "Kavoshkar Madan" was founded to produce zinc ingots. This product is mainly used in galvanization process. Therefore, now Farasaz factory, having one of the biggest galvanization facilities, can provide the main raw material for galvanization, zinc, easily by sister company, Kavoshkar Madan.

As mentioned above, Farasaz and Niroofaran factories were mainly founded in order to manufacturing steel structures. In 1990 and 2000 decades, by emerging of more need to developing power and telecom grids in Iran, Farasaz as the first private company helped Iranian government by producing huge quantity of TL and telecom towers. So, besides other steel structures, TL and telecom towers are one of the main products of Farasaz. It is notable that Farasaz group directed this profession, not strictly but generally, to design and manufacture of TL towers in Farasaz and telecom towers in Niroofaran.



Brief Introduction of Other Companies of FARASAZ Group

Niroofaran Co.

- Profession: Design, Manufacturing and Erection of Steel Structures and Telecom Towers
- Factory: Located in Safadasht Ind. Area (near Tehran) with total area of 55,000 square meters and 14,000 square meters production halls
- Contact info.: TEL +98(21)88482301, more details on www.niroofaran.com



Kavoshkar Madan Co.

- Profession: Producing Zinc Slab and Ingot Processing of Zinc Concentrates using Hydrometallurgical and Electrolyze method
- Factory: Located in Lia Ind. Area (Qazvin) with total area of 21,000 square meters and 5,000 square meters production halls.
- Contact info: TEL +98(21)88727869, 88715279



ENGINEERING DEPARTMENT

The engineering office with specialized staff and by benefiting necessary advanced software and hardware is the executive of all engineering and technical affairs, including:

- Shop drawing of all steel structures including complicated lattice towers
- Design of transmission lines
- Design of transmission line towers and their foundations
- Design of lighting poles and similar poles (camera pole, flag pole, navigation pole, etc), and lighting calculation
- · Preparing Welding Procedure Specification (WPS) for projects
- Preparing test procedures for type testing of towers in FARASAZ testing station

Farasaz is the first private company in Iran designing Transmission, Telecom and Lighting towers.



Pylon of Cable Bridge, Milad Tower, Tehran

SOFTWARES

Analysis and Design of Structures

• SAP2000 for All Structures

• ETABS for Building Structures

• SAFE for Foundation Slabs

• ANSYS for All Structures

• PLS-POLE for Transmission Poles

• PLS TOWER for Transmission Lattice Towers

• RISA TOWER for Telecom and Lighting Towers

Shop Drawing

- AUTOCAD
- TEKLA Structures
- Mechanical Desktop

Engineering Programming

MATLAB

Design of Power Transmission Lines

PLS-CADD

Lighting Calculation

- CALCULUX
- DIALUX

Project Control

MS Project

Accounting

Hamkaran System

General Managers of FARASAZ

Name	Title	Education	Experience (Years)
Dariush Naghshineh	General Manager	Ph.D. of Management & M.Sc. of Civil Engineering	18
Ali S. Mahdavi	Procurement Manager	Ph.D. of Management	27
Dariush Vojdani Production Manager		B.Sc. of Power Engineering	17
Reza Engineering Manager		M.Sc. of Civil Engineering	14
M. R. Esmaeeli Accounting Manager		B.Sc. of Accounting	11

List of Notable Equipments of FARASAZ Structural Steel Workshop

Row	Group	Equipment	Qty.
1	Bending	Gate Punch Press for Profile Bending	1
2	Bending	Hydraulic Pipe Bender	1
3	Bending	Press Brake 3m	1
4	Bending	Press Brake 6m	1
5	Bending	Press for Profile Bending	1
6	Bending	Profile Bending Furnace	1
7	СОМВО	CNC for Angle (Cut, Punch & Mark)	2
8	СОМВО	CNC for Plate (Cut, Punch & Mark)	1
9	СОМВО	Multi-Task Punch (Boring, Cutting & Marking)	2
10	Compressor	Air Compressor	3
11	Cutting	CNC Flame Cutting with 2m*6m Dim.	1
12	Cutting	Corner Shearing Punch	1
13	Cutting	Edge Shearing Punch	2
14	Cutting	Hydraulic Guillotine 0.5m (for max. thick. 5mm)	1
15	Cutting	Hydraulic Guillotine 1.5m (for max. thick. 10mm)	1
16	Cutting	Hydraulic Guillotine 6m (for max. thick. 16mm)	1
17	Cutting	Hydraulic Pipe Cutter	2
18	Cutting	Manual Profile Cutter	2
19	Cutting	Oxy-Fuel Cutting Torch	26
20	Cutting	Profile Cutting Punch	6
21	Cutting	Semi-Automatic Flame Cut Machine	8
22	Drilling	2-Way Punch	2
23	Drilling	Fixed Drilling Machine	2
24	Drilling	Magnetic Drill	3
25	Drilling	Manual Drilling Machine	16
26	Drilling	Manual Impact Drill	3

List of Notable Equipments of FARASAZ Structural Steel Workshop

Row	Group	Equipment	Qty.
27	Drilling	Punching Machine	10
28	Drilling	Radial Drilling Machine	3
29	Forming	Bar Straightener	1
30	Forming	Roller	1
31	Forming	Straightener of Pole Bodies	1
32	Grinding	Fixed Grinding Machine	4
33	Grinding	Slot Grinding Machine	6
34	Grinding	Various Grinding Machines (Normal, High Speed, Pneumatic & Mini)	132
35	Lifting	Fixed Boom Crane 2 ton	4
36	Lifting	Gearbox	3
37	Lifting	Hydrualic Elevator	1
38	Lifting	Lifting Magnet 2 ton	5
39	Lifting	Various Mobile Cranes 3-10 ton	4
40	Lifting	Various Overhead Cranes 3-10 ton	16
41	Machining	Lathe Machine	3
42	Machining	Milling Machine	1
43	Machining	Surface Grinding (Lathe) Machine	2
44	Marking	Marking Punch	3
45	Measuring	Elcometer (Thickness Meter)	5
46	Measuring	Hardness Tester	1
47	Measuring	Tensile Testing Unit	1
48	Miscellaneous	2-Way Manual Fixture	6
49	Power	High Frequency Transformer	1
50	Power	Power Generator	5
51	Sawing	Band Saw	3
52	Sawing	Circular Saw	1

List of Notable Equipments of FARASAZ Structural Steel Workshop

Row	Group	Equipment	Qty.
53	Sawing	Power Hacksaw	1
54	Surface Treatment	Painting Room	1
55	Surface Treatment	Sand Blasting Room	1
56	Threading	Electric Threading Machine	1
57	Threading	Manual Threading Machine	3
58	Weighing	Truck Scale 60 ton	2
59	Welding	Electrode Oven	9
60	Welding	GMAW (CO ₂) Welding Unit	27
61	Welding	Inverter	2
62	Welding	Power Supply	5
63	Welding	Rectifier	26
64	Welding	SAW Welding Unit	3
65	Welding	Stabilizer	2
66	Welding	Transformer	21











Row	Project	Client	Services*	Year
1	Store Halls	Banto Co.	M&E	1981
2	Ghom - Saveh Gas Pipe line	National Iranian Gas Co.	E	1981
3	Store Halls	Shetson Co.	M&E	1981
4	Building Structure	Tehran Regional Electric Co.	M&E	1981
5	Industrial Saloon	East Azerbaijan Industries Org.	M&E	1982
6	Store Halls	Gilan Tile Co.	M&E	1982
7	Industrial Saloon	Iran Mikhsazi Co.	M&E	1982
8	Industrial Saloon	Iran Zanjirsazi Co.	M&E	1982
9	Store Halls	Melli Shoe Co.	M&E	1982
10	Store Halls	Pars Porcelain Co.	M&E	1982
11	Industrial Saloon	Bella Shoe Co.	M&E	1983
12	Industrial Saloon	Mahpoosh Shoe Co.	M&E	1983
13	Industrial Saloon	Nozohoor Paper Co.	M&E	1983
14	Store Halls	Tehran Regional Electric Co.	M&E	1983
15	Industrial Saloon	Zanjan Mostazafan Org.	M&E	1983
16	Industrial Saloon	Neka Plastic Co.	M&E	1984
17	Industrial Saloon	Jahan Betonir Co.	M&E	1985

Row	Project	Client	Services*	Year
18	Industrial Saloon	Kavian Steel Structures Co.	M&E	1985
19	Production Halls	Neka Choob Co.	M&E	1985
20	Production Halls	Pars Shimi Co.	M&E	1985
21	Industrial Saloon	Setareh Filter Co.	M&E	1985
22	Production Halls	Ufo electronics Co.	M&E	1985
23	Production Halls	Charmin Co.	M&E	1986
24	Production Halls	Iran Almas Co.	M&E	1986
25	Industrial Saloon	Iran Generator Manufacturing Co.	M&E	1986
26	Production Halls	Mashad Chalk Co.	M&E	1986
27	Industrial Saloon	Milade Khorasan Agro Industry Complex	M&E	1986
28	Store Halls	Iranian Porcelain Industries Co.	M&E	1988
29	Industrial Saloon	Elahi Soap Co.	M&E	1989
30	Steel Parts for Heavy Machinaries	Iranian Army	М	1989
31	Industrial Saloon	Pars Padide Co.	M&E	1989
32	Industrial Saloon	Payegozar Co.	M&E	1989
33	Sedimentation Tank	Tehran Chemical Co.	М	1989
34	Structure of Central Powerhouse	Iran Ferro Alloy Co.	M&E	1990

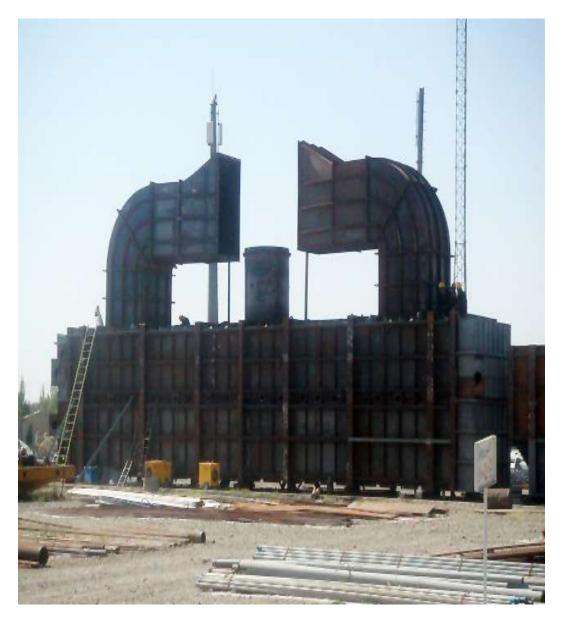
Row	Project	Client	Services*	Year
35	Aeiral Water Tank	Iran Ferro Alloy Co.	M&E	1990
36	Steel Structures	Isfahan Edjucation Org.	М	1990
37	Cement Silos	Karoon Agro Industry Co.	М	1990
38	Aghajari Production Saloon	National Iranian South Oil Co. (NISOC)	M&E	1990
39	Production Halls	Tabriz Carton Co.	М	1990
40	Numerous Walkway Bridges in Tehran	Tehran Municipality	M&E	1990
41	4 Steel Bridges in Tehran (Al-Ahmad, Sadr, Rajaee & Besat)	Tehran Municipality	M&E	1990
42	Steel Structures	Hamedanian Charity Org.	M&E	1991
43	Production Halls	Iran Dairy Co.	M&E	1991
44	Steel Structures	Iran Mofid Co.	M&E	1991
45	Production Halls	Iran Refractories Co.	M&E	1991
46	Production Halls	Kowsar Baft Co.	M&E	1991
47	Sport complex of Az-Zahra University	Ministry of Science	M&E	1991
48	Store Halls	National Iranian South Oil Co. (NISOC)	M&E	1991
49	Production Halls	NIOC, Ahwaz Procurement Ofiice	M&E	1991
50	Production Halls	Pileh No Co.	M&E	1991
51	Industrial Steel Structures	Bahareh 419 Corporation	M&E	1992

Row	Project	Client	Services*	Year
52	Production Halls	HIS Abhar Porcelain Co.	M&E	1992
53	Industrial Steel Structures	Iran Ferro Alloy Co.	M&E	1992
54	Industrial Steel Structures	Pakpey Co.	M&E	1992
55	Production Halls	Teif Shimi Co.	M&E	1992
56	Miscellaneous Steel Structures	Valfajr Shipping Co.	M&E	1992
57	Production Halls	Ghassem Iran Co.	M&E	1993
58	Gate cranes for Saloon	Iranian Army	М	1993
59	Prefabricated Steel Structures	Kavir Civil & Rehabilitation Co.	М	1993
60	Production Halls	Lorestan Chemical & Mineral Co.	М	1993
61	Pipe Rack for Aghar & Dalan Natural Gas Plant	NIOPDC	М	1993
62	Steel Bridge in Mahallati Highway, Tehran	Tehran Municipality	М	1993
63	Pipe Rack for Korpedje Refinery in Turkmenistan	NIOC (OIEC)	М	1996
64	Production Halls	Novin Kahanroba Co.	M&E	1996
65	Production Halls	Zarrin Porcelain Industries Co.	M&E	1996
66	Kangan Gas Refinery	National Gas Co.	М	1997
67	70m Derrick Tower in Korpedje, Turkmenistan	NIOC (OIEC)	М	1997
68	Wind Turbine Tower	Ministry of Power	М	1999

Row	Project	Client	Services*	Year
69	Steel structure of Turkmenbashi Gas Refinery in Turkmenistan	NIOC (OIEC)	М	1999
70	Steel structure of Farasaz Group Central Office Building	Farasaz Group	M&E	2000
71	Steel structures of Maroon Ethane Recovery Refinery	Nargan Co.	М	2001
72	1000MT steel structures of 2 Aromatic furnaces	Borzooye Petrochemical Co. (KTI/Technip)	M	2002
73	Steel structures of Maroon Poly- Propylen Refinery	Nargan Co.	М	2002
74	Steel structures of Assaluye Ethane Recovery & Gas Seperation Refinery	Nargan Co.	М	2002
75	Steel structures of Arak Olefin Refinery Development	Nargan Co.	М	2002
76	11km conveyor line for Tabas Coal Washing Complex	IRITEC	M&E	2003
77	"Process CPP" steel structure for Tabas Coal Washing Complex	IRITEC	M&E	2003
78	Steel Piping Parts	Teif Shimi Co.	М	2003
79	7 conveyor lines for Tabas Coal Washing Complex	IRITEC	M&E	2004
80	1300MT steel structures for Tabas Coal Washing Complex	IRITEC	M&E	2004
81	1500MT steel structures of L90 production halls	SAIPA Eng. & Development Co.	M&E	2005
82	750MT Steel structures for llam petrochemical complex	Energy Industries Eng. & Design Co. (EIED)	М	2006
83	Sport complex of Yasooj University	Ministry of Science	M&E	2006
84	11 underground oil storage reservoirs	SAMAN Joint Venture	М	2006
85	12 oil storage reservoirs for NIOC	SAMAN Joint Venture	М	2006

Row	Project	Client	Services*	Year
86	Steel structure of Production and Store Halls	Iran Transfo Co.	M&E	2007
87	Access Cable-Stayed Bridge for Milad Tower in Tehran	Band Co.	M&E	2009
88	1 Conveyor for Sangan Project	Azaran Co.	М	2010
89	Steel Structures of Tehran Refinery	Chaghalesh Co.	M&E	2010
90	1500MT steel structures of Safadasht Buildings	Sadra Noor Co.	M&E	2010
91	2000MT Steel Structure for Damghan Project	Tat Felez Co.	М	2010
92	3000MT Steel Structure of Gole Maryam Complex in Tehran	Omran Maroon Co.	М	2011
93	600MT Steel Structure of Anahita Building in Saadat-Abad, Tehran	Private Client	M&E	2011
94	2200MT Industrial Steel Structure in Ploor, Mazandaran	Vabel Noosh Ziar Co.	M&E	2011
95	600MT Steel Structure of Gandi Hotel in Tehran	Private Client	M&E	2012
96	500MT Steel Structure for Furnace of Ardekan Steel Complex	Tam Iran Khodro Co.	М	2012
97	3400MT Steel structure of Times Building in Sohanak, Tehran	Private Client	M&E	2013
98	700MT Steel Structures for Buildings of 3 Gas Substations in Kish Island	Parsian Co.	M&E	2015
99	1800MT Steel Structures for Maskane- Mehr Buildings in Hashtgerd	Sobhan Sazeh Atlas Co.	М	2015

^{*} Services: M: Manufacturing, E: Erection



Piece of Aromatic-4 Furnace (The Largest in the World) Manufactured for Borzooye Petrochemical in Assaluye



40m Structure of Isfahan Refractory Brick Factory



70m Derrick Tower in Korpedje, Turkmenistan



35m Structure for Tabas Coal Washing Project



Tabas Coal Washing Project



Ardekan Steel Complex Furnace Structure while Erection



Vabel Factory Steel Structure while Erection

HOT DIP GALVANIZING

The galvanization workshop of the factory with 30,000 tons annual capacity was established in 1992. This workshop has the capability of executing affairs of galvanizing steel structures with the length of 15m according to international Quality Management Basis (using of specialized experts and personals and having one of the biggest bathtubs in 800*150*180 cm dimensions and necessary hardware for this technology).

Hot dip galvanizing is a process in which the surface of the steel parts will be covered with a layer of zinc and zinc-ferrous alloy by plunging inside the melted zinc, this layer will protect the parts from environmental corrosion agent.

Basically hot dip galvanizing has been anticipated as the best method to protect steel construction and steel products against the corrosions. Hot dip galvanizing activities will be done in ten steps as following:

- Primary inspection of the parts and cleaning
- Degreasing and washing
- Acid washing and rinsing
- Fluxing
- Secondary inspection
- Preheating
- Plunging in melted zinc bath
- Cooling and cleaning
- Final inspection
- Packing



Using equipped chemical laboratory and quality control, the company has done all needed tests and controls for the parts, and the quality of the melted zinc as well the galvanize layer on them. The results of tests are presented according to BS729 and or ASTM 123A.

FARASAZ has got Iranian National Standard certification in 1995 for hot dip galvanizing. Also, FARASAZ is a member of Britain Galvanizers Association (GA).





STANDARDS

We use international reliable standards for design, procurement of raw material and fasteners, galvanization, inspection and testing, as listed following:

PRODUCT STANDARDS

DIMENSIONAL STANDARDS

ANGLES, EQUAL	EN 10056 / 1-2, ISO 657 / 1-5	BEAMS	EN 10034 (DIN 1025)
ANGLES, UNEQUA	LEN 10056 / 1-2, ISO 657 / 1-5	FLAT BARS	DIN 1017
PLATES	EN 10 029	ROUND BARS	DIN EN 10060
SHEETS	EN 10 051	PIPES	EN 10210 / 1-2
CHANNELS	EN 10279 (DIN 1026)	HOLLOW SECTIONS	EN 10210 / 1-2
POLE DIMENSION	S FN 10 Part 2		

QUALITY STANDARDS

MILD STEEL	EN 10025 / 1-6 Grade S235JR, EN 10025 / 1-6 Grade S275JR
HIGH TENSILE STEEL	EN 10025 / 1-6 Grade S355JO, EN 10025 / 1-6 Grade S355J2

FASTENERS STANDARDS

DIMENSIONAL STANDARDS

BOLTS	DIN 7990	DIN EN ISO 4014	ASME B 18.2.1
	DIN 931	DIN EN ISO 4016	ASME B 1.1
	DIN 933	DIN EN ISO 4017	ASME B 1.13M
	DIN 960	DIN EN ISO 4018	ASME B 16.5
	DIN EN 28676	DIN EN ISO 4762	ASTM A325
	DIN EN 1665	DIN EN ISO 7089	ASTM A490
	DIN 607	DIN EN ISO 8765	ISO 965-2
	DIN EN 14399-4	DIN EN ISO 8676	ISO 965-3
	DIN 912	DIN EN 1665	ISO 965-4
	DIN 603	BS 3692	BS 4190
	DIN 961	DIN 6914	DIN 6921

ANCHOR BOLTS As per customer drawings

NUTS	DIN 439	DIN EN ISO 4032	ASTM A 563M
	DIN EN 24034	DIN EN ISO 4034	NF EN 24033
	DIN 934	DIN EN 14399-4	BS 3692
	DIN 936	DIN 7967	BS 4190
	DIN 6915	DIN 555	
WASHERS	DIN 125	DIN 6916	ASME B 18.2.2
	DIN 126	DIN 6917	ASTM F 436M
	DIN 434	DIN 6918	
	DIN 435	DIN 7989	
SPRING WASHERS	5 DIN 127		
	DIN 128		

QUALITY STANDARDS

BOLTS ISO 898 / 1 ASTM A30, ASTM A 325M, ASTM A 490M, SAEJ 429, ISO 4759-1

ANCHOR BOLTS ISO 898 / 1, AISI 1020, AISI 1030, AISI 1050, AISI 4140

NUTS ISO 898 / 2, ISO 4759-1

WASHERS Structural Steel
SPRING WASHERS Spring Steel

GALVANIZING STANDARDS

HOT DIP GALVANIZING

ASTM A123	Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A153	Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A143	Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel
	Productsand Procedure for Detecting Embrittlement.
ASTM A385	Standard Practice for Providing High-Quality Zinc Coatings (Hot-Dip)
ASTM A384	Safeguarding Against Warpage and Distortion During Hot Dip Galvanizing
	of Steel Assemblies
ASTM A780	Standard Practice for Repair of Damaged Hot Dip Galvanized Coatings.
EN ISO 1461	Metallic Coatings - Hot Dip Galvanized Coatings on Fabricated Ferrous Products
ISO 1460	Metallic Coatings - Hot Dip Galvanized Coatings on Fabricated Ferrous Products
DIN EN ISO 1461	Hot Dip Galvanized Coatings on Fabricated Iron and Steel Articles Specification
	and Test Methods
ISO 14713	Protection Against Corrosion of Iron and Steel in Structures - Guidelines
EN 40 Part 4	Lighting Columns - Surface Protection of Metal Lighting Columns

MECHANICAL GALVANIZING

ASTM B695 Coatings of Zinc Mechanically Deposited on Iron and Steel

ELECTROGALVANIZING

ASTM B633	Electrodeposited Coatings of Zinc on Iron and Steel
ASTM B842	Electrodeposited Coatings for Zinc Iron Alloy Deposits
ASTM B840	Electrodeposited Coatings for Zinc Cobalt Alloy Deposits
ASTM B841	Electrodeposited Coatings for Zinc Nickel Alloy Deposits

INSPECTION & TESTING STANDARDS

TYPE TEST OF TL TOWERS

IEC60652 Loading Tests on Overhead Line Structures

MATERIAL & STEEL STRUCTURAL PRODUCTS

EN 10025 Part 1, 2 Hot Rolled Products of Non-Alloy Structural Steels

ASTM A370 Mechanical Testing of Steel Products
EN10002-1 Mechanical Testing of Metal Products
EN 10045 Part 1, 2 Impact Testing of Metal Products

ISO 6506 Hardness Test

IEC 652 / 60652 Loading Tests on Overhead Line Towers

FASTENERS

ISO 898 / 1 Mechanical Properties of Fasteners
ISO 898 / 2 Mechanical Properties of Nuts

WELDING

ANSI/AWS D1.1:2010 Structural Welding Code

ANSI/AWS D1.8:2009 Structural Welding Code – Seismic Supplement

GALVANIZING

ASTM A123	Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A153	Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A90	Standard Test Method for Weight of Coating on Iron and Steel Articles with
	Zinc and Zinc Alloy Coatings
ASTM A143	Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products
	and Procedure for Detecting Embrittlement.
ASTM A239	Standard Test Method for Locating Thinnest Spot in a Zinc Coating on Ironand Steel
	Articles by the Preece Test [Copper Sulfate Dip].
ASTM E376	Practice for Measuring Coating Thickness by Magnetic-Field or Eddy-Current
	Test Methods
EN ISO 1461	Metallic Coatings - Hot Dip Galvanized Coatings on Fabricated Ferrous Products
DIN EN ISO 1461	Hot Dip Galvanized Coatings on Fabricated Iron and Steel Articles Specification
	and Test Methods
ASTM B695	Coatings of Zinc Mechanically Deposited on Iron and Steel
ASTM B633	Electrodeposited Coatings of Zinc on Iron and Steel
ASTM B842	Electrodeposited Coatings for Zinc Iron Alloy Deposits
ASTM B840	Electrodeposited Coatings for Zinc Cobalt Alloy Deposits
ASTM B841	Electrodeposited Coatings for Zinc Nickel Alloy Deposits

CERTIFICATES





Hereby Certifies:

Farasaz Industrial Co.

Located at:

Moorchekhort Industrial Zone, 35th km of Tehran Road, Esfahan, Iran.

To the

ISO 9001:2008

Standard and has successfully implemented a Quality Management System which has been registered by Alliance International Registrar, LLC.

SCOPE: Design, Engineering, Procurement, Construction & Management (EPCM) of:
- Power Transmission Lines Projects,

-Tele Communication & Broad Casting & IT Projects,

 -Industrial Projects Consisting: Manufacturing of Structures, Machinery and Equipment & Lighting Systems.

- Hot Dip Galvanizing,

-Test Station for any Kind of Structures.

IAF Code: 17 NACE Code: DJ28.1

Certification Number: 1698

Date of Certification: Decem

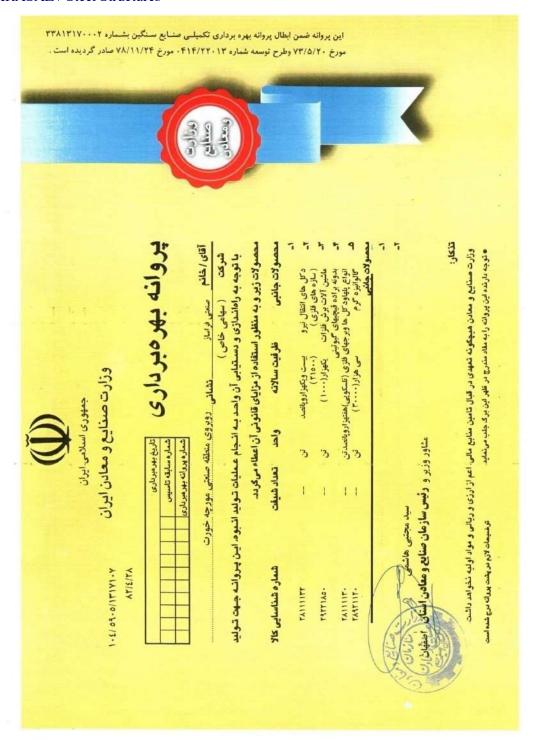
Date of Certification: December 22, 2012 Expiration Date: December 21, 2013



Sharon L. Rakow

Sharon L. Rakow Director of Certification Alliance International Registrar, LLC. 595 Forest Ave, Ste 5A Plymouth, MI 48170 www.allianceregistrar.com/ir





FACTORY LICENSE FROM IRANIAN MINISTRY OF INDUSTRIES



Deutsche Akkreditierungsstelle GmbH German Accreditation Body

Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

Accreditation

The DAKkS GmbH (German Accreditation Body) attests that the testing laboratory

Farasaz Test station Moorchekhort Industrial Area, Km 35 Isfahan, Tehran Road ISFAHAN, IRAN

is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out tests in the following fields:

mechanical loading tests on overhead line structures and mechanical technological tests on metallic components

The accreditation certificate is valid until 23.05.2015. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 1 page.

Registration number of the certificate: D-PL-11101-01-00

Berlin, 07.06.2010

See notes overleaf.

Dr. Thomas Facklam Managing Director



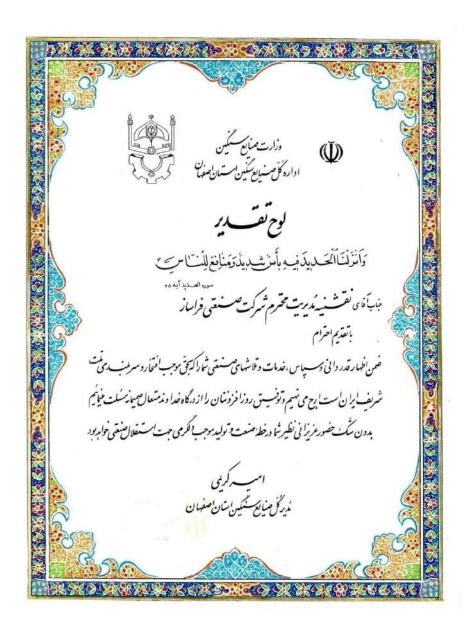
CERTIFICATE FOR GALVANIZATION FROM NATIONAL IRANIAN STANDARD ORG.



LICENSE FOR R&D DEPARTMENT FROM IRANIAN MINISTRY OF INDUSTRIES

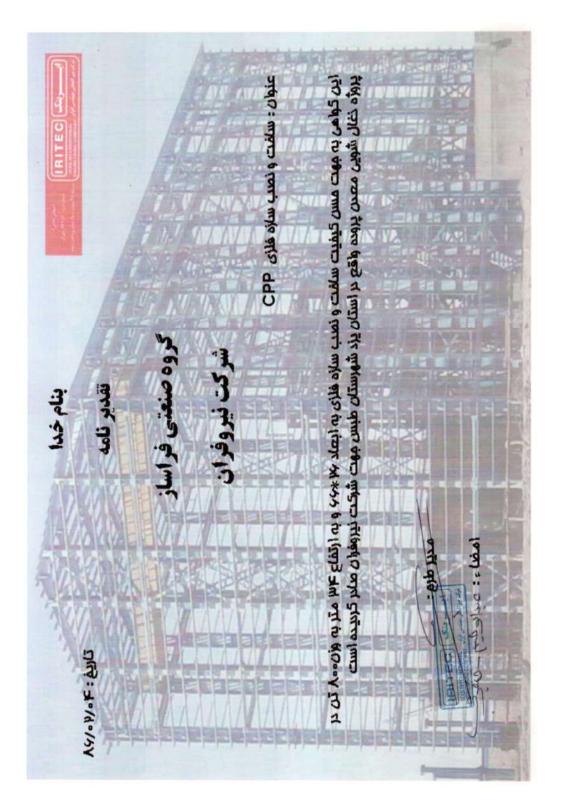


LICENSE FOR FOUNDING ENGINEERING DEPARTMENT FROM IRANIAN MINISTRY OF INDUSTRIES



APPRECIATION OF IRANIAN MINISTRY OF INDUSTRIES / ISFAHAN OFFICE





APPRECIATION OF IRITEC CO. FOR MANUFACTURING AND ERECTION
OF STEEL STRUCTURE OF TABAS COAL WASHING COMPLEX



APPRECIATION FOR MANUFACTURING AND ERECTION
OF STEEL STRUCTURE OF YASOOJ UNIVERSITY SPORT COMPLEX

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