FSL STEEL™

Since **1913**

A trusted name of quality.
Over 100 years of
commitment & services.

Fazal Steel (Pvt) Limited

Management System as per:

TÜV AUSTRIA HELLAS

Pakistan Standards

EN ISO 9001:2015 14001:2015 OHSAS 18001:2007

Khalid Building – Railway Road, Gujrat

Malik Abdul Karim
(1896-1960)

A Letter Head of the Firm

Malik Abdul Aziz
(1906-1987)

FSL GROUP

The history of FSL Group started in the year 1913 as a small hardware shop situated at Muslim Bazar Gujrat by two brothers our beloved Uncle and our Father. Subsequently, the business was shifted to Railway Roads location under the name and style of "Malik Abdul Karim Abdul Aziz" Khalid Building (1926), Railway Road, Gujrat, Punjab. They expanded their business through professional honesty, dedication and hard work. Their aim was to offer best quality services to the customers.

Exciting View of Khalid Building

Before partition the firm was the sole distributor of Tata Iron & Steel India, for Punjab & KPK provinces and was a regular importer of large quantity of steel products from Nippon Steel Corporation Japan & US Steel Corporation Pittsburgh USA.

FSL started production of steel rebars in the year 1988. However since 1981, the FSL Group has been engaged in the manufacturing of quality Billets under the name and style of "Karim Aziz Industries (Pvt.) Ltd" opposite the Railway Station Hassanabadal. The Group has 30 years long experience in the production of quality steel billets and steel rebars. We are producing deformed reinforcement steel rebars ASTM A 615 Grade-60 & 40 and have the capacity to produce products on order.

A View of FSL mills from 9th Avenue, Islamabad

FSL GROUP OF COMPANIES

FSL a premier industrial group of Pakistan with strong presence in Steel manufacturing and rolling, Food processing and textile industry. The group history spread over nine decades of devotion, passion and hard work, marked with monumental achievements and tremendous growth. Today FSL is synonymous for quality, commitment and adherence to business ethics. The group strength is well reflected from its production capacity to produce more than 250,000 Tons/annum.

FSL STEEL	MAT CAST	Barkat hi-tech	KARIM AZIZ Billets & Sections	Barkat RICE Quality is our motto	Barkat PARBOILED Quality is our motto
Islamabad	Islamabad	Faisalabad	Hasan Abdal	Islamabad	Gujrat

FSL, Office, I-9, Islamabad

Internal view of the office, Islamabad

RANGE OF PRODUCTS

FSL branded products are manufactured under controlled conditions in accordance with internationally acclaimed product standards. In today's age of intense competition, very few brands enjoy a decisive edge in free market; FSL is however one exception. This has been possible because of sheer commitment, extensive efforts, unrivaled expertise and fair dealings; a matchless combination with ultimate benefit going to the customer.

Fazal Steel (Pvt) Limited produces steel reinforcement rebars Grade 40, 60, 75, 80 & 100 conforming to standards ASTM A 615, BSI 4449 and AASHTO M-31, sizes from 9mm to 43mm deformed, plain rebars, shafts (1.5" - 4") and structural steel such as girders, angles, channels,I-beams and flat rolls conforming to standard ASTM A 36.

PRODUCTS	SPECIFICATIONS
1. For the reinforcement of concrete deformed Rebar	— According to ASTM A 615 Grade 40, 60, 75, 80,100 and AASTHO M31
2. Cold Twisted Rebar	— BSI 4449 Grade (250 & 460 N/m m2)
3. Heavy Round Rebar	— ASTM Grade A36
4 Mirco Alloy Steel Rebar	
5. Corrosion Resistance Steel Rebar and Steel Sections	
6. Earthquake Resistant A 706 Rebar	— A706 Grade 60

DEFORMED REBARS

Deformed Bar, hot rolled worked steel rebars manufactured under American standard ASTM A 615. Steel rebars manufactured by FSL are used in most critical constructions especially for Bridges, Dams, Power Plants, Nuclear Projects, Motor Ways M1, M2, M3, M4, M5 & N5 (National Highway), Airports, Cement Plants, high-rise and multi-storey buildings (Housing Projects).

VISION

Fazal Steel (Pvt) Ltd (FSL) always provide high quality products to its valued clients which meet the international standards to the satisfaction of its buyers. FSL believes in professional honesty and honour its commitment to the following values:

- Professionalism
- Ultimate Quality
- Team Work
- Reliable Services
- Courtesy
- Timely Delivery
- Responsiveness
- Customer
- Satisfaction

MISSION

Fazal Steel exists to carry forward its family legacy by using Best Technology available and a team of professionals to meet and exceed our customer' requirement.
We see to perform better by developing our Human Resource & by continually improving our Quality Management System.

RAW MATERIAL

Availability of prime quality billets is extremely important for any re-rolling mill producing rebars as per international standards like ASTM A 615 4449 and AASHTO M-31. FSL recognizes the fact and it is therefore that the company got itself registered with Pakistan Steel Mills Corporation (PSMC) as a consumer dealer. PSMC is the largest producer of prime quality billets in Pakistan. The quality of its products is known to be in accordance with international standards. PSMC has long-term contracts to supply prime quality billets to FSL. Imported billets are also used as per customer requirement.

Moreover, FSL Group has Electric Arc & Induction furnaces. The furnaces have a melting capacity to produce over 150,000 T/year of billets on CC Plants (Continuous Caster). These state of the art C.C. plants are of Italian technology and manufacture high quality billets with international standards. Special alloys and stainless steel is also produced on AOD Converter and Ladle Refining Furnace.

Furnace are well equipped with high-tech and laboratories. The chemical analyses to produce metal up to the mark quality and standard steel. FSL believes and emphasis on excellent quality, outstanding services and standard for its valued clients.

MATERIAL HANDLING

FSL has ample space in its steel yard with a storage capacity of more than 10,000 tons of finished products / raw material. Overhead cranes and billet cutting shear machines have been installed to expedite the material handling process and make the raw-material available for production in shortest possible time. FSL has the most elaborate network available in the region.

18 Tons Casting

Continuous Casting Billets

STRENGTH IN TECHNOLOGY

In its drive to serve the customer better, FSL has introduced advance and efficient technology with an equally effective production process. The company has also complemented its abilities in manufacturing of steel rebars with a very useful quality assurance system; certified under ISO9001:2015 14001:2015 OHSAS 18001:2007. In fact, FSL is the first steel mill in Pakistan to have implemented ISO Standards way back in 1997-98.

Banking on its strength in technology and expertise in the business, the organization has embarked upon an extensive effort to earn a place at the forefront of national projects.

QUALITY ASSURANCE

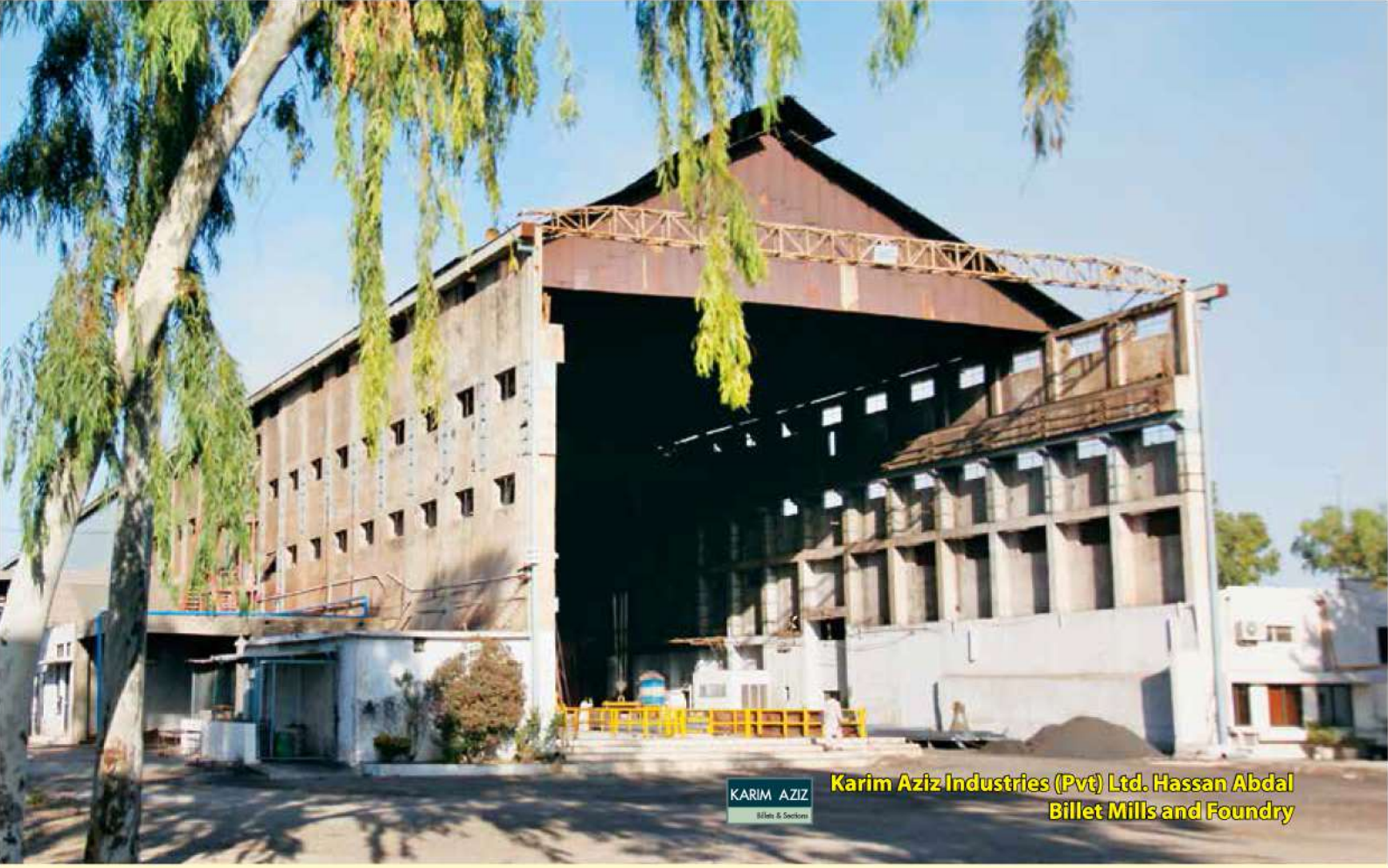
Although the company has had a suitable quality control system in place for years, the transformation from a traditional system to a modern quality assurance system has lifted its performance to a new height. The fact that this system was designed in-house and its implementation was carried out by FSL itself speaks a lot about management's abilities and commitment of its workers.

To achieve standardization in its operations, the company has documented manuals, procedures, work instructions and job descriptions. Every worker is trained and provided with copies of relevant work instructions, written in local language, enabling him to carry out his job in a thorough professional manner.

The company has formed a highly competent team, headed by Director Sales, with an objective to keep a close watch on the performance of all departments. This team includes Quality Assurance Manager, ISO Standards Lead Auditor and Departmental Heads as its members. The team members coordinate with each other to ensure that customers get best quality and best service at all times. A review meeting is held at least once in a month to discuss ways to improve performance of the system from time to time.

Billet Handling


Stocks of ASTM 615A G-60 & G-40



Karim Aziz Industries (Pvt) Ltd. Hassan Abdal
Billet Mills and Foundry

Customers are also invited to give their feedback on products and services. Their remarks, suggestions and complaints are discussed in the review meetings and actions are taken accordingly.

CHARACTERISTICS AFFECTING QUALITY OF STEEL REBAR

Following factors affect the strength of steel rebars and its bonding with concrete.

- **Rib Spacing**
- **Deformation**
- **Height of Ribs**
- **Surface Scrapes**
- **Gap Cord**
- **Cross-Section Area**

Any deviation in these parameters can significantly decrease bonding capability with concrete as well as strength of rebars itself.

Unit weight of steel rebars is another factor that can significantly affect quality of construction as well as hurt the customers pocket considerably. It can be proved that manufacturing of steel rebars under uncontrolled conditions or without required expertise produces over-size / under-size or over-weight / under-weight steel rebars. Such rebars when used in construction significantly hamper implementation of engineering-design as the weight and strength of steel rebars varies considerably.

FSL ensures that all quality parameters are adhered to strictly and on consistent basis. The expertise in manufacturing and quality of raw material utilitized makes FSL branded steel rebars an extremely reliable product for quality conscious customers. Its no surprise if FSL remains the first choice for construction of dams, hydro-power plants, nuclear-power plants, bridges, motorways, airports, factories, high-rise buildings, specially in Seismic Zone (earthquake zone) 2 & 3 etc.

Spectro Lab, Islamabad

Spectro Lab, Hassan Abdal

LABORATORY

The physical testing laboratory at FSL is equipped with modern testing equipment. The equipment is well-maintained and regularly calibrated by reputed agencies including Air Force Complex, Engineering Universities at Lahore and Taxila.

The laboratory is capable of performing several requisite tests on steel rebars manufactured i.e. yield & tensile, elongation, bend test and hardness test. Frequent tests are performed at various stages of manufacturing to ensure a final product that meets international standards.

Apart from the usual physical testing laboratory, FSL is the only steel re-rolling mill in Pakistan to have the chemical testing facilities through most advanced - Spectro Lab with 21 elements. This enables the company to apply comprehensive quality control measures at input, in process and final stages of the product.

Installed with modern testing equipment, chemical and physical testing laboratories of FSL are taken at par with any internationally recognized testing laboratory.

Machining Shop, Islamabad

Mechanical Testing Lab, Islamabad

FSL STEEL

Fazal Steel (Pvt) Ltd, Islamabad
Automatic Re-Rolling Mills

MAT CAST

Mat Cast (Pvt) Ltd, Islamabad
Billet Mills & Foundry

Rafiq logistics

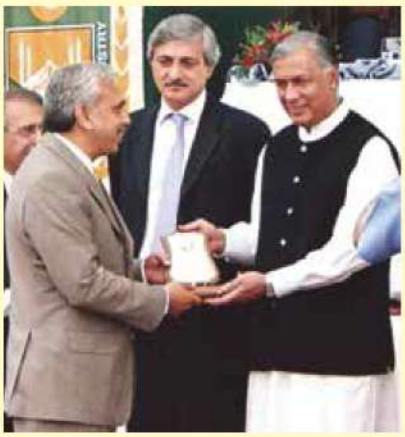
Our own Transport System to ensure on time delivery to our client

LOGISTICS FLEET

FSL manages its own fleet of prime movers to ensure timely deliveries to its customers. The company has heavily invested transportation and goes extra mile in providing this facility to the customers for delivery at site on time. We have 40 long Vehicles (Trailers ranging from 30 Mt to 80 Mt).

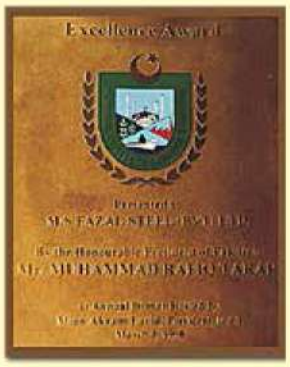
ACHIEVEMENTS

Fazal Steel (Pvt) Ltd. is an organization that has been a leading contributory in development of Pakistan for the last few decades. FSL's role was acknowledged at the highest level when the organization was awarded Excellence Award by the President of Pakistan (1998). Since then the company has won accolades for its quality standards and service to nation.



Mr. Karim Aziz Malik, Director
FSL receiving ICCI Export
Performance Award (2004)
from the Honourable
Prime Minister of Pakistan

Mr. Karim Aziz Malik, Director
FSL receiving Excellence Award 1998
from President of Pakistan
Muhammad Rafiq Tarrar



FSL STEEL

FAZAL STEEL (PVT) LIMITED

Up to The Quality Mark & Stantdards
Established Since 1913

Material Certification & Physical Test Report of Steel Reinforcement Bars

Client Name:	M/S CGGC NJ PROJECT		Product Classification:	DEFORMED	
Date:	9-Feb-18		Standard:	ASTM A615	
Site:	NAUSERI		Reference No:	8462-CGGC	

Grade	Lot No / Heat No	MASS		Diameter		Cross Section Area	Yield		Tensile		Elongation (%)	Gauge Length	Bend Test at 180°	
		Weight gm	Unit WT Kg/m	Nominal mm/inch	mm/inch	Inch Sq (mm Sq)	Load Kn / Ton	Stress Achieved Psi/Kmm sq	Load Kn / Ton	Stress Achieved Psi/Kmm sq	Achieved %	Actual inch/mm	Pin Dia (mm/inch)	remarks
G-60	1701063	-	2.235	NO-6	-	0.441	13.20	67048	19.50	99048	15.50	8.0 Inch	-	OK
"	1701064	-	2.229	NO-6	-	0.440	13.60	69236	19.40	98764	16.00	8.0 Inch	-	OK
"	1701065	-	3.952	NO-8	-	0.780	24.10	69210	34.40	98790	15.50	8.0 Inch	-	OK
"	1701066	-	3.983	NO-8	-	0.786	23.80	67827	34.10	97181	16.00	8.0 Inch	-	OK
"	1701067	-	6.410	NO-10	-	1.265	39.20	69413	55.20	97745	15.00	8.0 Inch	-	OK
"	1701068	-	6.400	NO-10	-	1.263	38.50	68282	54.40	96481	15.50	8.0 Inch	-	OK
"	1701069	-	7.930	NO-11	-	1.565	47.50	67987	68.50	98845	15.00	8.0 Inch	-	OK
"	1701070	-	7.905	NO-11	-	1.560	48.50	69641	66.90	96062	15.50	8.0 Inch	-	OK

Customer's Representitave

Tested By

Director/ Manager

CUSTOMER ORIENTATION

Sales department of FSL plays an active role in ensuring total satisfaction of the customer. The department is involved with customers from order taking stage to the delivery of final product. Before confirming any sales, each customer is explained the complete product features through marketing material and in-person presentations. Customers are also invited to visit factory premises and witness quality control arrangements. The idea is that the customer must know what they are going to get for their money.

After the order is confirmed from a customer, sales department gets in touch with the production planning department to ensure deliveries as per customer's given schedule. The department once again comes in picture when final inspection of each consignment is performed to ensure that products so delivered are as per the contract signed. These procedures have been designed and are followed to ensure total customer satisfaction.

SOME OF OUR VALUED CUSTOMERS

- NHA
- SKB
- Ghazi Barotha Contractors
- ICC
- Greaves Cotton
- Lucky Development
- IJM
- Garmon Pakistan
- Tameer Associates
- Astron Construction
- Pakistan Atomic Energy Commission
- Al-Gurair-GIGA
- Bina Good Year
- CWE
- Pak-Turk International
- CDA
- Shifa International
- Directorate General Defence Purchase
- Pak Gulf Construction (Pvt.) Ltd
- Yucel Turk Construction
- Daewoo
- SMEC
- Kohat Cement
- China Railway Construction
- Pakistan Aeornautical Complex
- Pakistan Ordnance Factory
- FWO
- Hanbo Steel
- SKYWAYS
- Water & Power Development Auth.
- NESPAK
- GHQ
- TAISEI
- DONG FANG
- Pioneer Cement
- DESCON
- HRL
- PEC
- Amanat Hussain & Co
- China Machine Building Int.
- WAH Industries Limited
- STFA
- Hyundai
- GIKI
- Directorate of Industry & Mineral Development

Sichuan Electric

Hasnain

National Construction Limited

M/S. B.N.P. (PVT.) LTD., Grand Hyatt Hotel

China Gezhouba Group Company

North East China International

Zahir Khan & Brothers

Gharibwal Cement

Toyota Capital

IVCC Engineering

Guarantee Engineers

Maqbool Calson

Power China of Construction

Siemens Pakistan Engg. Co.

Izhar Group

Isra University

Banu Mukhtar Const. (Pvt.) Ltd.

Potential Engineers

Kingcrete Builders

NAQVI & SIDDIQUI

Gharibwal Cement

STL Engineers & Contractors

Xinging beixin Construction Group Co. Ltd.

Habib Construction Services

Bestway Cement Limited

Widecon Engineers & Contractors

New City Arcade

Kyung Dong Civil Engg.

Samra Enterprises

LTH JV

MGC Construction Corp.

Safa Gold Mall

Netracon Technology & Engineering

Sh. Abdur Razzaq & Company

ERRA

Usmani Associates

Bismillah Group

Bauer International

Sambu Const.

China State Construction Engro Corp. Ltd.

Maple Leaf Cement Ltd.

The Grand Atrium

Sungbo Engineering Co.

Al Shifa Trust Eye Hospital

Sinohydro Construction Group

Zaraj Group

Iqra University

PDIL

Mak Ibrahim

Gold Roof (Pvt.) Ltd.

SB Feeds

PROJECTS

The company has actively participated in several coveted national projects like Terbella Dam – Extension Unit, The Pakistan Motorway Project M2 (Islamabad-Lahore) and M1 (Islamabad - Peshawer), M3 (Pindi Bhattian to Faisalabad), M4 (Faisalabad to Multan) Ghazi Barotha Dam, Chashma Hydro Power Project, Chashma Nuclear Reactor, Indus Highway, airports and number of similar projects. An excellent track record in these projects has made FSL a very prominent and respectable brand.

FSL has the honour of supplying steel to the bridge with tallest pillars in Asia (Kalar Kahar-M2), bridge with widest arches in Asia (Attock) and the longest joint-less bridge (Jehlum-M2).

EMBASSIES & AIRPORTS

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS
1.	Spanish Embassy, Islamabad	BS 4449 G-60	M/x. Hajvairy & Hussain Co., Islamabad	M/s. Estudio De Auruitectura Madrid, Spain
2.	Lahore International Airport	ASTM A615 G-60	Husnain Construction	
3.	Hussnain Lagon J/V	ASTM A615 G-60		
4.	Benazir International New Airport	ASTM A615 G-60	LTV (Technical Associates	

National Insurance Company

5.	Indian Embassy	ASTM A615 G-60	
6.	Malaysian Embassy Islamabad	ASTM A615 G-60	Samara
7.	United Kingdom Expansion	ASTM A615 G-60	
8.	Italian Embassy Islamabad	ASTM A615 G-60	Samara

POWER HOUSES & TUNNEL PROJECTS

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS
1.	Tarbela Hydro Power 3rd Extension Unit 11-14 Tarbela		M/s. Hyundai Hidco J/V, Seoul, S. Korea.	M/s. Chase, T. Main International Inc. USA.
2.	Wapda Transmissioin Line 500 kVA Tarbela	ASTM A615 G-60	M/s Greaves Cotton Pak. Ltd.	
3.	Wapda House	BS 4449 G-60	M/s. Redco Pakistan, Blue Area, Islamabad	M/s. Suri & Partners, Karachi
4.	Wapda Transmission Line Mardan to Peshawar	ASTM A615 G-60	M/s. ICC, 65 Main Boulevrd, Gulberg-III, Lahore	
5.	Rawat Grid Station	ASTM A615 G-40	Alwasay Const. Vo. Ltd., Islamabad	A.E.G.
6.	Chashma Hydropower Project Civil	ASTM A615 G-60 ASTM A615 G-40	Hyundai Hidco Hakas J/V	Chashma Group of Consultants
7.	Chashma Nuclear Power Pruject P.A.E.C., Kundian, Mianwali	ASTM A615 G-60 ASTM A615 G-40	China Petroleum Engg. Construction Col	
8.	Ghazi Barotha Power Project Dam + 52 K.M. Power Canal	ASTM A615 G-60 ASTM A615 G-40	Ghazi Barotha Contractors, Attock	Pakistan Hydro Consultants
9.	Ghazi Barotha Power Pruject, Power House, Barotha Site, Attock	ASTM A615 G-60 ASTM A615 G-40	Dongfang Electric Corp. China	Pakistan Hydro Consultnats
10.	Pakistan Motorway (M-1)	ASTM A615 G-60 ASTM A615 G-40	Bayindir Construction Inc.	Pakistan Motorway Consultants
11.	Sukkur By-Pass	ASTM A615 G-60	M/s. Astaldi Ferrocemento. J/V	A.A. Associates
12.	SEPC Sichuan Electric Power Corporation	ASTM A615 G-60 ASTM A615 G-40	Wapda Power Transmission Line Bannu - Lodhran	
13.	Malakand Hydro Power Project-III	ASTM A615 G-60	China International Water & Shadow Electric Corp. Development Authority	
14.	M. K. Sons (Pvt.) Ltd.,	BS 4449 G-60		
15.	Secondary Transmission Line, Rawat - Islamabad	ASTM A615 G-60	ICC (Pvt.) Ltd	
16.	Secondary Transmission Line Bannu - Karachi	ASTM A615 G-60	Sichuan Electric Power	
17.	Gomal Dam, D.I. Khan Resources Harbin Power Engineering J/V	ASTM A615 G-60	China National Water	
18.	Hydropower, Malakand	ASTM A615 G-60 ASTM A615 G-40	M/s. China International Water Electric Corp.	
19.	Wapda Transmission Line, Besham	ASTM A615 G-60 ASTM A615 G-40	M/s. Northeast China Internatiional Electric Power Corp	
20.	Hydropower, Besham	ASTM A615 G-60 ASTM A615 G-40	M/s. Sinohydro Khanz Khwar HPP Management	
21.	Muzaffarabad Chattar Class Hydro Project	ASTM A615 G-60	CGGC China	
22.	Mangla Dam, Raising Project, MDR-10 Mangla Dam	ASTM A615 G-60	M/s. China Internatiional Water & Electric Corporation	
23.	Torkham-Jalalabad Road, Afghanistan	ASTM A615 G-40	M/s. Echo West. International (Pvt.) Ltd.	
24.	Transmission Line, Wapda	ASTM A615 G-60 ASTM A615 G-40	ICC (Pvt.) Ltd.	
25.	Transmission Line	ASTM A615 G-40	M/s. Potential Engineers (Pvt.) Ltd.	
26.	Thakot Transmission Line	ASTM A615 G-60 ASTM A615 G-40	M/s. Dongfang Electric Corporation	

Neelum Jehlum Hydro Power

Tarbella Dam Hydro Power 3rd Ext.

Ghazi Brotha Power Project

Kohat Tunnel Project

Tarbella Dam

UNIVERSITIES, SCHOOLS AND HOSPITAL BUILDING PROJECTS

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS
1.	Lahore University of Management & Sciences (LUMS)	BS 4449 G-60	M/s. Technical Associates Pak (Pvt.) Ltd.	M/s. Sh. Fida & Co., Karachi
2.	Ghulam Ishaq Khan Institute of Engineering Sciences & Technology Topi, N.W.V.P. Pakistan	BS 4449 G-60	M/s. Amirzaman (Pvt.) Ltd., Nowshera.	M/s. Naqvi Siddiqui & Bros. Associates, Islamabad.
3.	Beacon House School, H/8, Islamabad	ASTM A615 G-60	M/s. Alkan Corporation (Pvt.) Ltd., Gulberg-III, Lahore	M/s. Pioneers
4.	International Islamic University, Islamabad	ASTM A615 G-60 ASTM A615 G-40	Moin & Sons	
5.	Doctor's Hospital, Under Pass, Lahore	ASTM A615 G-60	SKB	

Shifa International Hospital Project

MOTORWAY, BRIDGES AND UNDERPASSES PROJECT

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS
1.	Islamabad Lahore, Motor Highway Project, Sector-3 & 4 from Balkawar to Islamabad	ASTM A615 G-60 10 to 43mm size	M/s. Snowy Mountain Seoul, S. Korea	Engineering Corporation Ltd., Australia
2.	Haro Bridge, G.T. Road, Distt: Attock	ASTM A615 G-40	M/s. Mohendisin-e-Masud, Baluchistan	M/s. A.A. Associates, karachi
3.	Rehman Bridge, Akbar Bridge, AJ&K	ASTM A615 G-40	M/s. ACL, Harley Street, Rawalpindi	
4.	China Petroleum Engineering Construction Corporatioin Project	ASTM A615 G-60	C.P.E.C.C. Nowshera House # 69, St. # 46, F-6/4, Islamabad	PACIFIC International
5.	National Highways, Chablat to Nowshera	ASTM A615 G-60	China Petroleum Engineering Construction Co.	
6.	Karak Rhayan (on Indus Highway) & Rajan Project	ASTM A615 G-60	Sezai Turkes Feyzi-Akkaya Construction Co., Istanbul, Turkey	Republic Engineers, Lahore
7.	Indus Highway Karak, Pindi Bhattian	ASTM A615 G-60	China Petroleum Engineering Construction Co.,	PACIFIC International Consultant
8.	Kharian two Bridges, Lahore-Shahdara Bridge	ASTM A615 G-60	M/s. Highway Bridges Construction, Supermarket, Islamabad	
9.	Construction of Bridges KPK Province International Division	ASTM A615 G-60	M/s. Taisei Corporation, Tokyo, Japan	M/s. Nippon Koei Co.
10.	Contract No. 12, Karappa	ASTM A615 G-60 ASTM A615 G-40	C.P.E.C.C., Karappa	PACIFIC International Consultant
11.	Contract No. 13, Karak	ASTM A615 G-60 ASTM A615 G-40	C.P.E.C.C., Karak	PACIVIC International Consultant
12.	Pattoki Highway Project, Multan Road, Lahore, Chobiat, Nowshera N-5	ASTM A615 G-60 ASTM A615 G-40	M/s. Husnain Const. Co. Ltd., 242 Ahmed Block, New Garden Town, Lahore	
13.	Pakistan Motorway (M-1)	ASTM A615 G-60 ASTM A615 G-40	Bayindir Construction In.	Pakistan Motorway Consultant
14.	Sukkur By-Pass	ASTM A615 G-40	M/s. Astaldi Ferocemento. J/V	A.A. Associates
15.	Nowshera-Chablat Additional Carriage N-5	ASTM A615 G-60 ASTM A615 G-40	Sachal Engineering	
16.	River Chenab Bridge, Chiniot	ASTM A615 G-60 ASTM A615 G-40	Ghulam Rasool & Co.	
17.	Railway, Overhead Bridge, Taxila	ASTM A615 G-60 ASTM A615 G-40	Amico Construction Co.	
18.	G/S 220/132 kV, Sub Station (Wapda)	ASTM A615 G-60 ASTM A615 G-40	Al Wasay Construction Company (Pvt.) Ltd., Islamabad	
19.	Sutlaj River Bridge, Bahawalpur	ASTM A615 G-60	SKB, Lahore	
20.	Satpara Dam, Sakurdu	ASTM A615 G-60	Descon Engineering, Lahore	
21.	Lahore Under Pass F.C. College, Lahore	ASTM A615 G-60		

M1

M2

M3

22.	(Torkham-Jalalabad Road, Afghanistan)	ASTM A615 G-60	M/s. Echo West International (Pvt.) Ltd.
23.	Jalalabad Byass	ASTM A615 G-60	M/s. Wenling Hongyuan Traffic Enginering L.L.C
24.	Jinnah Barrage, Dawood Khel	ASTM A615 G-60	M/s. Dongfang Electric Corporation
25.	Underpass, Blue Area Islamabad	ASTM A615 G-60	M/s. Gammon Pakistan Ltd.
26.	G-6, G-7, Underpass Islamabad	ASTM A615 G-60	Skyways Construction
27.	M3 Pindi Bhattian to Faisalabad	ASTM A615 G-60	Husnain Construction
28.	M4 Faisalabad to Multan	ASTM A615 G-60	CWE

GOVERNMENT & SEMI GOVERNMENT PROJECTS

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR
1.	Headquarters Civil Works Organization, Rawalpindi	ASTM A615 G-60 ASTM A615 G-40	Various Contractors Karachi
2.	Naval Headquarters, E-8, Islamabad	ASTM A615 G-60	M/s. Kingcret (Pvt.) Ltd
3.	GHQ, AG's Branch (Housing Directorate), Rawalpindi	ASTM A615 G-60	Various Contractors
4.	Frontier Works Orgaization, Rawalpindi	ASTM A615 G-60 BS 4449 G-60	Various Contractors
5.	DGP (Army), Rawalpindi		All over Pakistan
6.	DW & CE (Navy & Air Force)	ASTM A615 G-60 ASTM A615 G-40	All over Pakistan
7.	Army Officers Welfare Housing Scheme No. II, Rawalpindi	ASTM A615 G-60 ASTM A615 G-40	Habib Rafiq (Pvt.) Ltd. Army Housing GHQ, Rawalpindi
8.	ISI Housing Project	ASTM A615 G-60	Group of Contractors

COMMERCIAL TOWERS & MULTISTORY PROJECT

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS
1.	OGDCL Tower, Blue Area, Islamabad	BS 4449 G-60	M/s. Interhom (Pvt.) Ltd., Plot # 313, Islamabad	Republic Engineers Consultants
2.	Centaurus, Islamabad	ASTM A615 G-60	M/s. China State Guarantee Engineers	
3.	National Insurance Ltd., Blue Area, Islamabad Commercial Tower	BS 4449 G-60	Gulf Const. Company	M/s. Arshad Shahid Abdullah, 210 Central Hotei Building, Karachi
4.	World Trade Centre Islamabad	ASTM A615 G-60 ASTM A615 G-40	M/s. IJM Gulf (JA) Ltd.	
5.	Islamabad Stock Exchange Building	ASTM A615 G-60	M/s. Habib Rafiq (Pvt.) Limited	
6.	Tower Building Islamabad	ASTM A615 G-60	M/s. Bina Goodyear Middle East Construction Company	
7.	Cecil Hotel, Murree	BS 4449 G-60	Imperial Builders Cecil Hotel	
8.	Mediacom Tower, Faisalabad	ASTM A615 G-60	M/s. Mediacom Trade City.	
9.	Consultution Avenue I Islamabad	ASTM A615 G-60		
10.	Salar Centre, Lahore	ASTM A615 G-60	Salar Group	

CEMENT PLANTS & TEXTILE PROJECTS

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS
1.	Pak Americal Fertilizer Ltd. (A unit of NFC Pakistan Ltd., Iskanderabad, Daud Khel	ASTM A615 G-40	Ammico Counts. (Pvt.) Ltd., Lahore	

Centaurus Mall, Islamabad

Convention Center, Islamabad

Islamabad Stock Exchange

OGDCL

2.	Maple Leaf Cement Factory Ltd.	ASTM A615 G-60	Izhar Construction (Pvt.) Ltd. Builder Associates	
3.	Fauji Cement Project, Jhang Bahtar Road, Fateh Jang	ASTM A615 G-60	M/s. Gammon Pakistan Ltd., Engineers & Contractors, peshawar Road, Rawalpindi	A.A. Associates, Karachi
4.	Rafnan Maize Products, Faisalabad	BS 4449 G-60	Com Products International, USA	
5.	Extension of Plant	ASTM A615 G-60	M/s. Kohat Cement Company Limited	
6.	Extension of Plant	ASTM A615 G-60 ASTM A615 G-40	M/s. Bestway Cement Limited, Chakwal (line-2)	
7.	Extension of Plant	ASTM A615 G-60	Gharibwal Cement Limited	
8.	Extension of Plant	ASTM A615 G-60 ASTM A615 G-40	M/s. Maple Leaf Cement Factory Limited	

HYDRO POWER PROJECT

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS	YEAR
1.	Jinnah Hydro Power, Kalabagh, Mianwali	ASTMA615 G-60/40	Dongfang Electric Corp	Wapda	2006
	Alloy Khan Khawar Hydro Power, Thakot, KPK.	ASTMA615 G-60/40	Dongfang Electric Corp	Wapda	2006
2.	CGGC Residential Colony, Neelum Jhelum Project, Chattar Kalas, AJK	ASTMA615 G-60/40	Sachal Engineering	Neelum-Jhelum	2011 toda
	PATRIND HYDRO POWER, Muzaffarabad, AJK	ASTMA615 G-60	KYUNDONG CIVIL ENGINEERING & CONST CO, LTD	Wapda	2011
3.	Hydro Power Project, Golen Gol, Chitral	ASTMA615 G-60/40	Sambu Construction Co	Wapda	2011 todate
4.	PATRIND HYDRO POWER, Muzaffarabad, AJK	ASTMA615 G-60/40	Daewoo Corp	Wapda	2013 to 2016
5.	PATRIND HYDRO POWER, Muzaffarabad, AJK	ASTMA615 G-60/40	Sungbo Development & Engineering	Wapda	2013
6.	Hydro Power Project, Nomal Naltar, Gilgit.	ASTMA615 G-60/40	Ali & Sons	Wapda	2014 to 2016
7.	1230 MW Coal Power Project, Sahiwal	ASTMA615 G-60/40	Power Construction Coporation		2015
8.	1230 MW Coal Power Project, Haveli Bahadur Shah, Jhang.	ASTMA615 G-60/40	Power Construction Coporation		2016 todate
9.	669 MW Hydro Power, Karot, Punjab.	ASTMA615 G-60	CGGC Karot		2016 todate
10.	1410MW Hydro Power Project, Ext. 4, Tarbela	ASTMA615 G-60/40	Power Construction Coporation		2016 todate
11.	669 MW Hydro Power, Karot, Punjab.	ASTMA615 G-60	Power Construction Coporation, Karot		2016 todate
12.	870MW Hydro Power Project, Naran, Kaghan, KPK.	ASTMA615 G-60	CGGC S.k Project		2017 todate

UNIVERSITY, SCHOOL AND HOSPITAL BUILDING PROJECT

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS	YEAR
1.	Housing Soceity, Riwat	ASTMA615 G-60/40	MGC, Zaraj		2013
2.	AJK University, Chattar Kalas, AJK	ASTMA615 G-60/40	Sambu Construction Co		2012
3.	Extension, Rawalpindi	ASTMA615 G-60/40	Al-Shifa Eye Trust Hospital		2013
4.	Metro Bus Project, Lahore	ASTMA615 G-60/40	Habib Construction Pvt Ltd	Nespak	2014
5.	Metro Bus Project, Islamabad	ASTMA615 G-60/40	Zahir Khan & Brothers	Nespak	2014
6.	Metro Bus Project, Islamabad	ASTMA615 G-60/40	Maqbool Associates	Nespak	2014
7.	Grand Hayat Hotal, Islamabad	ASTMA615 G-60/40	Estate One Pvt Ltd		2014
8.	Doctor Hospital, Lahore	ASTMA615 G-60/40	Saad Khan & Brothers		2008
9.	Air University, Islamabad	ASTMA615 G-60/40	Widecon Pvt Ltd		2017

MOTORWAY BRIDGES & UNDERPASSES

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS	YEAR
1.	NBBIA, Islamabad	ASTMA615 G-60/40	Siemens Pakistan	Civil Aviation	2012
2.	Bridge Project, Chattar Kalas, AJK	ASTMA615 G-60/40	HABIB RAFIQ PVT LTD	Neelum Jhelum	2012
3.	Road and Bridge Project, Chattar Kalas, Rawalakot, Bagh, AJK	ASTMA615 G-60/40 & Construction	xinjiang beixin road		2012 todate
4.	Jheeka Gali, Murree	ASTMA615 G-60/40	Ivcc Pvt Ltd		2013
5.	Metro Bus Project, Rawalpindi to Islamabad	ASTMA615 G-60	Habib Construction Pvt Ltd	Nespak	2015
6.	Metro Bus Project, Rawalpindi to Islamabad	ASTMA615 G-60 & BROTHERS	ZAKIR KHAN	Nespak	2015
7.	ORANGE LINE, Lahore	ASTMA615 G-60	Habib Construction Pvt Ltd	Nespak	2016 todate
8.	ORANGE LINE, Lahore	ASTMA615 G-60	Maqbool Associates	Nespak	2016 todate
9.	Motorway-4, M-5, Jalalpur Sharif, Ghotki, Zahir Pir, Uch Sharif, Multan	ASTMA615 G-60	China State Const	Renardet S.A.	2017
10.	Motorway-4, Kabirwala	ASTMA615 G-60	CGGC JV GRC	Renardet S.A.	2017
11.	Bridge Project Mirpur to Islamkot, Mirpur AJK.	ASTMA615 G-60 & Construction	xinjiang beixin road	Renardet S.A.	2017
12.	Motorway-4, Khanewal	ASTMA615 G-60 & Construction	xinjiang beixin road	Renardet S.A.	2017
13	Tunnel Project, Chitral	ASTMA615 G-60/40	Sambu Construction Co	Renardet S.A.	2017
14.	Motorway-4, Toba Tek Singh.	ASTMA615 G-60 & Construction	xinjiang beixin road	Renardet S.A.	2017

COMMERCIAL TOWERS & MULTI STORIES PROJECT

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS	YEAR
1.	Shopping Mall, Taxila	ASTMA615 G-60/40	New City Orcade	Taxila	2017

Embassies & Airports

S/NO.	PROJECT	STEEL GRADE	CONTRACTOR	CONSULTANTS	YEAR
1.	Spanish Embassy, Islamabad	ASTMA615 G-60/40	Hajvery and Husnain Co		1999
2.	Lahore International Airport, Lahore	ASTMA615 G-60/40	Husnain Construction		2001
3.	Indian Embassy, Islamabad	ASTMA615 G-60/40	Guarantee Engineering		2010
4.	Malaysian Embassy, Islamabad	ASTMA615 G-60/40	Smara Interprises		2011
5.	U.K Embassy Expansion, Islamabad	ASTMA615 G-60/40	Smara Interprises		2011
6.	Attalion Embassy, Islamabad	ASTMA615 G-60/40	samra interprises		2012
7.	BBIA New International Airport, Islamabad	ASTMA615 G-60/40	Technical Associates	Civil Aviation	2013
8.	China Embassy, Islamabad	ASTMA615 G-60/40	China Embassy		2017

CERTIFICATE

TÜV AUSTRIA

Management system as per
EN ISO 14001:2004

Fazal Steel (Pvt.) Limited

Head Office:
Plot No. 418-421, I-9 Industrial Area, Islamabad - Pakistan

Factory Address:
Plot No. 413-14, I-9 Industrial Area, Islamabad - Pakistan

manufacturing of deformed and torsion steel bars
for reinforcement of concrete and section steel

CERTIFICATE

TÜV AUSTRIA

Management system as per
OHSAS 18001:2007

Fazal Steel (Pvt) Limited

Head Office:
Plot No. 418-421, Industrial Area, I-9, Islamabad - Pakistan

Factory Address:
Plot No. 13-14, Industrial Area, I-9 Islamabad - Pakistan

manufacturing of deformed and torsion steel bars for
reinforcement of concrete and section steel

CERTIFICATE

TÜV AUSTRIA

Management System as per
EN ISO 9001 : 2008

FAZAL STEEL (PVT.) LIMITED
Plot No. 418-421, Industrial Area, I-9
ISLAMABAD, PAKISTAN.

MANUFACTURING OF DEFORMED AND TORSION STEEL BARS FOR
REINFORCEMENT OF CONCRETE AND SECTIONAL STEEL.

Athens, 2014-10-31

TÜV AUSTRIA GROUP

Book No.
Number: 000067

Pakistan Standards

Pakistan Standards and Quality Control Authority
Licence for the use of the Pakistan Standard Mark

Licence No.

Agreement No.

M/s.

Address:

Licence shall be valid from to and renewable as prescribed under the Rules.

THE FIRST SCHEDULE

PS Mark	Article / Process	Pakistan Standard(s)
1	2	3
	Deformed Steel Bar "FAZ Thread"	

THE SECOND SCHEDULE

Article / Process	Unit	Marking Fee Per Unit	Mode of Payment
1	2	3	4
Deformed Steel Bar "FAZ Thread"	Ex-Factory Price		Through Bank Draft Quarterly

Director

Place

Date

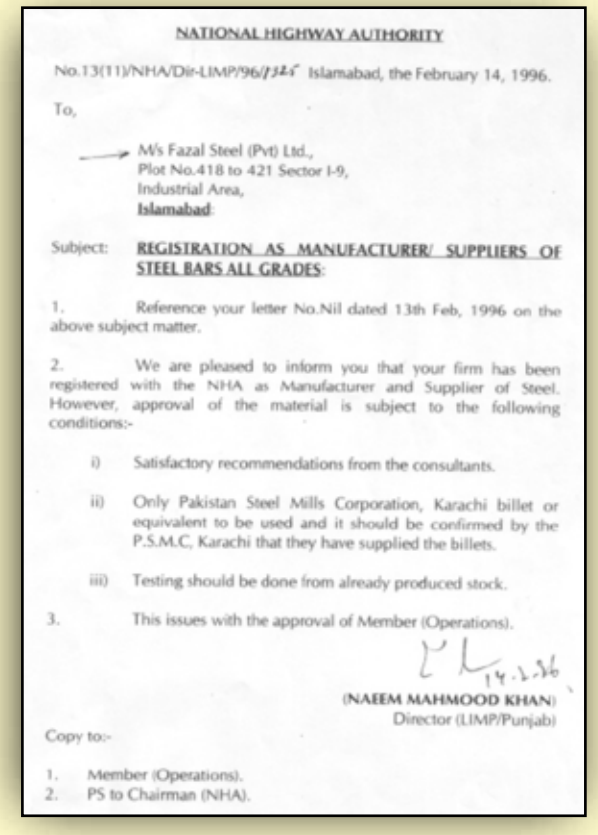
Pakistan Standards

PSS: 1879/2009

APPROVAL & CERTIFIED

FOLLOWING ARE THE APPROVAL LETTERS

National Highway Authority



NATIONAL HIGHWAY AUTHORITY

No.13(11)/NHA/Dir-LIMP/96/1325 Islamabad, the February 14, 1996.

To,

M/s Fazal Steel (Pvt) Ltd.,
Plot No.418 to 421 Sector I-9,
Industrial Area,
Islamabad

Subject: REGISTRATION AS MANUFACTURER/ SUPPLIERS OF STEEL BARS ALL GRADES

1. Reference your letter No.Nil dated 13th Feb, 1996 on the above subject matter.

2. We are pleased to inform you that your firm has been registered with the NHA as Manufacturer and Supplier of Steel. However, approval of the material is subject to the following conditions:-

i) Satisfactory recommendations from the consultants.

ii) Only Pakistan Steel Mills Corporation, Karachi billet or equivalent to be used and it should be confirmed by the P.S.M.C, Karachi that they have supplied the billets.

iii) Testing should be done from already produced stock.

3. This issues with the approval of Member (Operations).

14.2.96

(NAEEM MAHMOOD KHAN)
Director (LIMP/Punjab)

Copy to:-

1. Member (Operations).
2. PS to Chairman (NHA).

Approval for Ghazi Barotha Project

PAKISTAN HYDRO CONSULTANTS

Ref. EPDF-L- 869 26 June 1997

Dongfang Electric Corporation
Construction Site Office
House No. 45/A, Darul Salam Colony
Attock

GHAZI-BAROTHA HYDROPOWER PROJECT
CONTRACT C-03, POWER COMPLEX
Steel Reinforcement Bars

Attn: Mr. Huang Shengsang , Project Manager

Reference your letter No. DEC/PHC/124/97 dated June 03, 1997.

Dear Sir,

The technical data and other document regarding steel reinforcement bars manufactured by FAZAL STEEL (PVT) LTD., submitted vide your above referred letter have been examined and found to be conforming to Standards ASTM A615, Grade 40 and 60, as specified in provisions of Clause 8.4.07 of Technical Provisions of Contract. Approval is hereby accorded for use of the same in permanent works of Contract C-03.

Yours very truly,
for Pakistan Hydro Consultants,

(E. Harvey Owin)
Chief Resident Engineer
Power Complex

cc: CE/CM, PHC, Lahore
DCM, PHC, Attock
File No. C03.6.11.5
03.C-0.4.07

Approval for Pakistan Hydro Consultants

MAIN

NESPAK

Tarbela Hydropower Third Extension Project

Ref: MAIN-CE/1345 Date: Feb. 26, 91

TO WHOM IT MAY CONCERN

It is to certify that approximately 3500 Metric Tons of deformed steel bars, conforming to ASTM-A615 (Grade 60) supplied by M/s Fazal Steel (Pvt) Ltd. were used in Tarbela Hydropower Third Extension Project, Units 11 to 14. The bar sizes supplied ranged from No. 6 to No. 11 in accordance with ASTM Standards.

Samples were taken, from all lots of reinforcement supplied, and were tested, the reinforcing bars conformed to specifications.

A. ZULFIQAR
PROJECT MANAGER

Approval from Pakistan Engineering Council

Pakistan Engineering Council

Date 15th Dec 199

TO WHOM IT MAY CONCERN

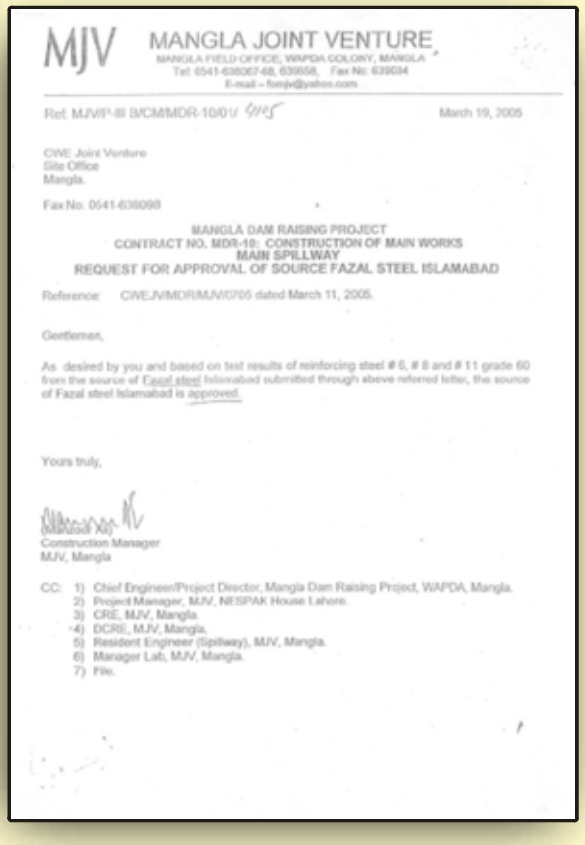
This is to certify that as per NESPAK letter No.NE/PEC/31-439 dated 1/8/1991 STEEL supplied by M/s FAZAL STEEL LTD (FAZAL STEEL) is being used as for the Construction of PAKISTAN ENGINEERING COUNCIL Building at G-5/2, Islamabad.

Dy. Registrar

APPROVAL & CERTIFIED

FOLLOWING ARE THE APPROVAL LETTERS

Approval for Mangla Raising Project



MJV MANGLA JOINT VENTURE

MANGLA FIELD OFFICE, WAPDA COLONY, MANGLA
Tel: 0541-638067-68, 639058, Fax No: 639034
E-mail – fomjv@yahoo.com

Ref: MJV/P-III B/CMMDR-10/01/ 6945 March 19, 2005

CWE Joint Venture
Site Office
Mangla.

Fax No: 0541-638098

MANGLA DAM RAISING PROJECT
CONTRACT NO. MDR-10: CONSTRUCTION OF MAIN WORKS
MAIN SPILLWAY
REQUEST FOR APPROVAL OF SOURCE FAZAL STEEL ISLAMABAD

Reference: CWEJVMDRMAN/0705 dated March 11, 2005.

Gentlemen,

As desired by you and based on test results of reinforcing steel # 5, # 8 and # 11 grade 60 from the source of Fazal steel Islamabad submitted through above referred letter, the source of Fazal steel Islamabad is approved.

Yours truly,

Construction Manager
MJV, Mangla

CC: 1) Chief Engineer/Project Director, Mangla Dam Raising Project, WAPDA, Mangla.
2) Project Manager, MJV, NESPAK House Lahore.
3) CRE, MJV, Mangla.
4) DCRE, MJV, Mangla.
5) Resident Engineer (Spillway), MJV, Mangla.
6) Manager Lab, MJV, Mangla.
7) File.

Appreciation Certificate Naqvi & Siddiquie

NAQVI AND SIDDIQUIE
ARCHITECTS - ENGINEERS ISLAMABAD

Certificate

This is to certify that M/S Fazal Steel (Pvt) Ltd., is one of the few enlisted factories with us. They are major suppliers of steel for our projects and being an ISO certified company are highly recommended by us to all the clients and contractors. Other aspects of their dealing including customer focus and cooperation are also commendable.

Chief Resident Engineer,
M/S Naqvi & Siddiquie,
Architects – Engineers,

Approval Certificate from National Highway

Government of Pakistan
Ministry of Communications
National Highway Authority

No. LSMP/LAMP/92 Dated 7th May, 1992

Mr. K. N. Vyas,
Executive Managing Director,
Dawood Corporation,
Lahore.

Subject: APPROVAL REQUEST FOR STEEL REINFORCEMENT – LAHORE ISLAMABAD MOTORWAY PROJECT

In continuation of this office letter of even No. dated 30th April, 1992 on the subject noted above, National Highway Authority has no objection in accepting the supply of steel from M/s Fazal Steel provided it meets the structural specifications of contract documents.

(NAEEM AHMED CHAUDHRY)
GENERAL MANAGER (PUNJAB)

Dealership Certificate Pakistan Steel Mills

Pakistan Steel Mills Corporation Limited

HEAD Office : Bin Qasim, P. O. Box 5428 Karachi. Cable : "PAKSTEEL"
Telex : 25824 PSMC PK. Telephone : 737321 – 40

APPROVAL & CERTIFIED

FOLLOWING ARE THE APPROVAL LETTERS

Approval for Kharian - Rawalpindi Project

KAMPSAX INTERNATIONAL AS

Engineering Associates &

Republic Engineering Corporation Pvt. Ltd.

Subject: SOURCE APPROVAL M/S FAZAL STEEL ISLAMABAD

Yours sincerely,

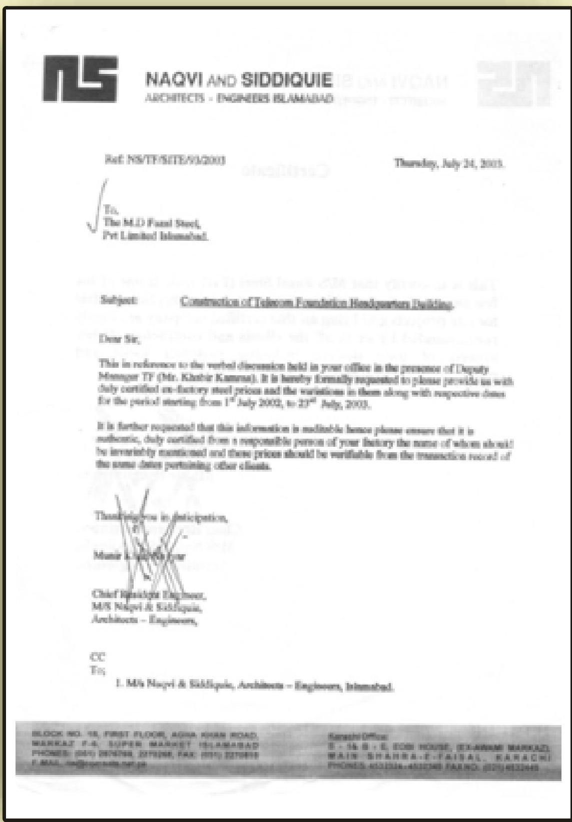
Kampsax International A/S

National Highway Authority

Kharian-Rawalpindi & Chablat - Nowshera Additional Carriageway

Kharian - Rawalpindi Section

Appreciation Certificate Naqvi & Siddiquie



NAQVI AND SIDDIQUIE

ARCHITECTS - ENGINEERS ISLAMABAD

Ref: NS/TF/SITE/93/2003 Thursday, July 24, 2003.

To,

The M.D Fazal Steel,

Pvt Limited Islamabad.

Subject: Construction of Telecom Foundation Headquarters Building.

Dear Sir,

This in reference to the verbal discussion held in your office in the presence of Deputy Manager TF (Mr. Khabir Kamran). It is hereby formally requested to please provide us with duly certified ex-factory steel prices and the variations in them along with respective dates for the period starting from 1st July 2002, to 23rd July, 2003.

It is further requested that this information is auditable hence please ensure that it is authentic, duly certified from a responsible person of your factory the name of whom should be invariably mentioned and these prices should be verifiable from the transaction record of the same dates pertaining other clients.

Thanking you in anticipation,

Chief Resident Engineer,

M/S Naqvi & Siddiquie,

Architects – Engineers,

CC

To;

1. M/s Naqvi & Siddiquie, Architects – Engineers, Islamabad.

Approval Certificate form SMEC
for M2 Motorway Project

SMEC

21 April 1994

To Whom It May Concern

SMEC has been contracted by National Highway Authority of Pakistan to supervise the construction of the Islamabad Lahore Motorway Project.

One of the major suppliers of deformed steel bars to the Project has been Fazal Steel (PVT) Limited of Islamabad.

SMEC's records to date show the pass rate is approximately 93% for Fazal Steel's deformed steel bars, approved by SMEC for supply to the Motorway Project.

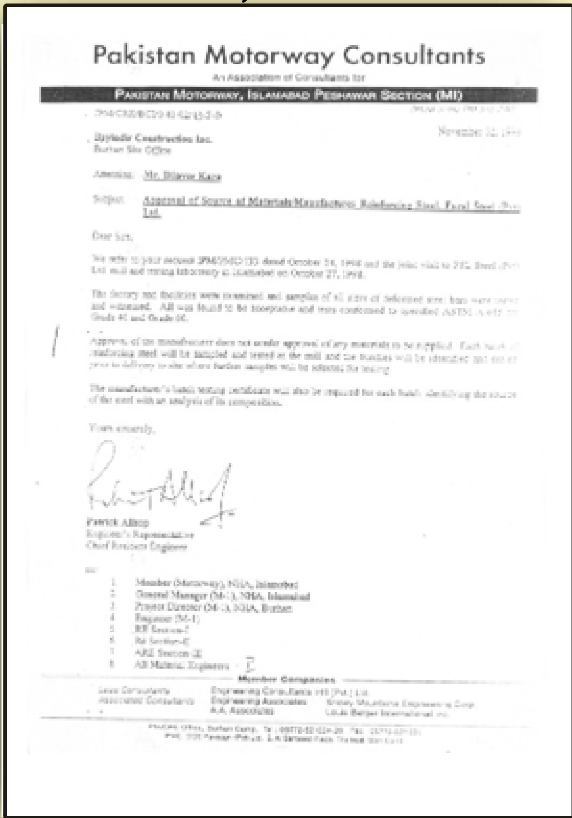
This letter has been issued at the request of of M/S Fazal Steel (Pvt) Limited.

Yours faithfully,

Greg Goodsell

Acting Chief Resident

Approval Certificate from Pakistan
Motorway Consultant M1



Pakistan Motorway Consultants

An Association of Consultants for

PAKISTAN MOTORWAY, ISLAMABAD PESHAWAR SECTION (MI)

Yours sincerely,

Patrick Allsop

Member Companies

APPROVAL & CERTIFIED

FOLLOWING ARE THE APPROVAL LETTERS

Appreciation Certificate from Daewoo Corporation

DAEWOO

To Whom It May Concern

This is to certify that **Daewoo Corporation** has used steel deformed rebars manufactured by **M/S Fazal Steel (Pvt) Limited, Islamabad** for construction of Lahore Islamabad Motorway Project.

Motorway has been one of the biggest national projects in Pakistan and it was critically important for us to use material with most dependable quality and standard. **FSL** rebars conforming to ASTM /GSA standards in both Grade 60 and Grade 40, has been the first choice to us. This is because of high quality standards maintained by **FSL**.

Fazal Steel has supplied 3749 MTons to Daewoo Corporation out of total quantity of deformed rebars used in this project. This includes 40mm rebars manufactured and supplied first time in Pakistan.

Snowy Mountain Engineering Corporation (SMEC) has been consultant for supply (sales) of steel rebars, where FSL achieved pass rate above 95% which is highest by any international standard.

Thanking you.

Nam Chul Kim
Deputy General Manager
Procurement Department
Daewoo Corporation

Appreciation Certificate from SAMBU Construction Co.

SAMBU

CONSTRUCTION CO., LTD.
NEW BONG ESCAPE HYDRO ELECTRIC POWER COMPEX OFFICE MIRPUR AJ&K

M/s Fazal Steel (PVT) Limited
I-9, Islamabad – Pakistan.

TO WHOM IT MAY CONCERN

It is privilege to acknowledge your efforts and recognize the supplying of Deform Steel (G-60, ASTM A-615) approximately **1,508/MT** at 84-MW New Bong Escape Hydro Electric Power Project, Leher, Mirpur (AJK).

M/s Fazal Steel (PVT) Limited during this turnaround deserve great appreciation by putting excellent and professional participation and prompt reaction to our requirements, maintaining quality of Deform Steel which enabled us to execute concrete activities smoothly and on time.

We hope that M/s Fazal Steel (PVT) Limited will continue to represent a truly professional presence in our future projects.

(Jun Woo Pae)
General Manager
Sambu Construction Co.

FSL STEEL™

DIMENSION REQUIREMENT FOR DEFORMED STEEL REBARS FOR CONCRETE REINFORCEMENT ACCORDING TO ASTM A 615

BSI STANDARDS
BRITISH STANDARD INSTITUTE
MILTON KEYNES
U K

Deformed Bar Designation Numbers, Nominal Weights [Masses], Nominal Dimensions, and Deformation Requirements

Bar Designation No.[A]	Nominal Weight, 1b/ft [Nominal Mass, kg/m]	Nominal Dimensions[B]			Deformation Requirements, in. [mm]		
		Diameter, in. [mm]	Cross Sectional Area in.^{2} [mm^2]	Perimeter, in. [mm]	Maximum Average Spacing	Maximum Average Height	Maximum Gap (Chord of 12.5% of Nominal Perimeter)
3[10]	0.376[0.560]	0.375 [9.5]	0.11 [71]	1.178 [29.9]	0.262 [6,7]	0.015 [038]	0.143 [3.6]
4[13]	0.668 [0.994]	0.500 [12.7]	0.20[129]	1.571 [39.9]	0.350 [8.9]	0.20 [0.51]	0.191 [4.9]
5[16]	1.043[1.522]	0.625 [15.9]	0.31 [199]	1.963 [49.9]	0.437 [11.1]	0.028 [0.71]	0.239 [6.1]
6[19]	1.502[2.235]	0.750 [19.1]	0.44 [284]	2.356 [59.8]	0.525 [13.3]	0.038 [0.97]	0.286 [7.3]
7[22]	2.044 [3.042]	0.875 [22.2]	0.60 [387]	2.749 [69.8]	0.612 [15.5}	0.044 [1.12]	0.334 [8.5]
8[25]	2.670 3.973]	1.000 25.4]	0.79 [510]	3.142 [79.8]	0.700 [17.8]	0.050 [1.27]	0.383 [9.7]
9[29]	3.400 [5.060]	1.128 [28.7]	1.00 [645]	3.544 [90.0]	0.790 [20.1]	0.056 [1.42]	0.431 [10.9]
10[32]	4.303 [6.404]	1.270 [32.3]	1.27 [819]	3.990 [101.3]	0.889 [22.6]	0.064 [1.63]	0.487 [12.4]
11 [36]	5.313 [7.907	1.410 [35.8]	1.56 [1006]	4.430 [112.5]	0.987 [25.1]	0.071 [1.80]	0540 [13.7]
14[43]	7.65 [11.38]	1.693 [43.0]	2.25[1452]	5.32 [135.1]	1.185 [30.1]	0.085 [2.16]	0.648 [16.5]
18 [57]	13.60 [20.24]	2.257 [57.3]	4.00 [2581]	7.09 [180.1]	1.58 [40.1]	0.102 [2.59]	0.864 [21.9]

[A] Bar number are based on the number of eights of an inch included in the nominal diameter of the bars [bar numbers approximate the number of millimetres of the nominal diameter of the bar]

[B] The nominal dimensions of a deformed bar are equivalent to those of a plain round bar having the same weight [mass] per foot (metre) as the deformed bar.

Tensile Requirements

	Grade 40 [300][A]	Grade 60 [420]	Grade 75 [520][A]
Tensile strength, min, psi [MPa]	60 000 [420]	90 000 [620]	100 000 [690]
Yield strength, min, psi [MPa]	40 000 [300]	60 000 [420]	75 000 [520]
Elongation in 8 in. [203.2] min, %:			
Bar Designation No.			
3 [10]	11	9	...
4, 5[13, 16]	12	9	...
6[19]	12	9	7
7, 8 [22, 25]	...	8	7
9, 10, 11 [29, 32, 36]	...	7	6
14, 18 [43, 57]	...	7	6

[A] Grade 40 [300] bars are furnished only in size 3 through 6 [10 through 19].
[B] Grade 75 [520] bars are furnished only in size 6 through 18 [19 through 57].

Bend Test Requirements

Bar Designation No.	Pin Diameter for Bend Tests[A]		
	Grade 40 [300]	Grade 60 [420]	Grade 75 [520]
3, 4, 5[10, 13, 16]	$3^{1/2}$	$3^{1/2}$	...
6[19]	5d	5d	5d
7, 8 [22, 25]	...	5d	5d
9, 10, 11 [29, 32, 36]	...	7d	7d
14, 18 [43, 57] 90□	...	9d	9d

FSL STEEL™

COLD WORK REBARS FOR CONCRETE REINFORCEMENT ACCORDING TO BSI 4449 Tensile Properties

BSI STANDARDS
BRITISH STANDARD INSTITUTE
MILTON KEYNES
U K

Cross - sectional area and mess

Nomianl Size	Cross-sectional area mm²	Mass per metre run kg
6[1)]	28.3	0.222
8	50.3	0.395
10	78.5	0.616
12	113.1	0.888
16	201.1	1.579
20	314.2	2.466
25	490.9	3.854
32	804.2	6.313
40	1256.6	9.864
50[1)]	1963.5	15.413

This is a nonpreferred size

Chemical Composition of steel grades: cast analysis

Element	Grade 250 % (max.)	Grade 460 % (max.)
Carbon	0.25	0.25
Sulphur	0.060	0.050
Phosphorus	0.060	0.050
Nitrogen	0.012	0.012

Note 1: The maximum value for nitrogen does not apply of the chemical composition shows a minimum aluminium content of 0.020% or if sufficient other nitrogen binding elements are present.

Note 2: Nitrogen content is not normally given on a release certificate.

Grade	Yield Strength Rk 1) N/mm2	Stress ratio Rm/Rg 2) (min.)	Elongation at fracture A5 (min.) %	Total elongation at maximum force Agt 3) (min.) %
250 250	1.15	22	-	
460A4)	460	1.05	12	2.5
460B3)	460	1.08	14	5

1) For routine testing the yield strength shall be considered a minimum value. For determination of the long term quality level, the values given shall be for the characteristic strength (see 3.14).
2) Rm is the tensile strength.
3) The total elongation at maximum force shall be measured and recorded and available for inspection, but values obtained below the minimum value specified shall not be cause for non- conformity with this British Standard.
4) Ductility classes A and B are designated ductility classes N and H respectively in DD ENV 1992/1/1:1992.

Tolerance on mass

Nominal size (mm)	Tolerance on mess per metre run %
6	±9
8 and 10	±6.5
12 and over	±4.5

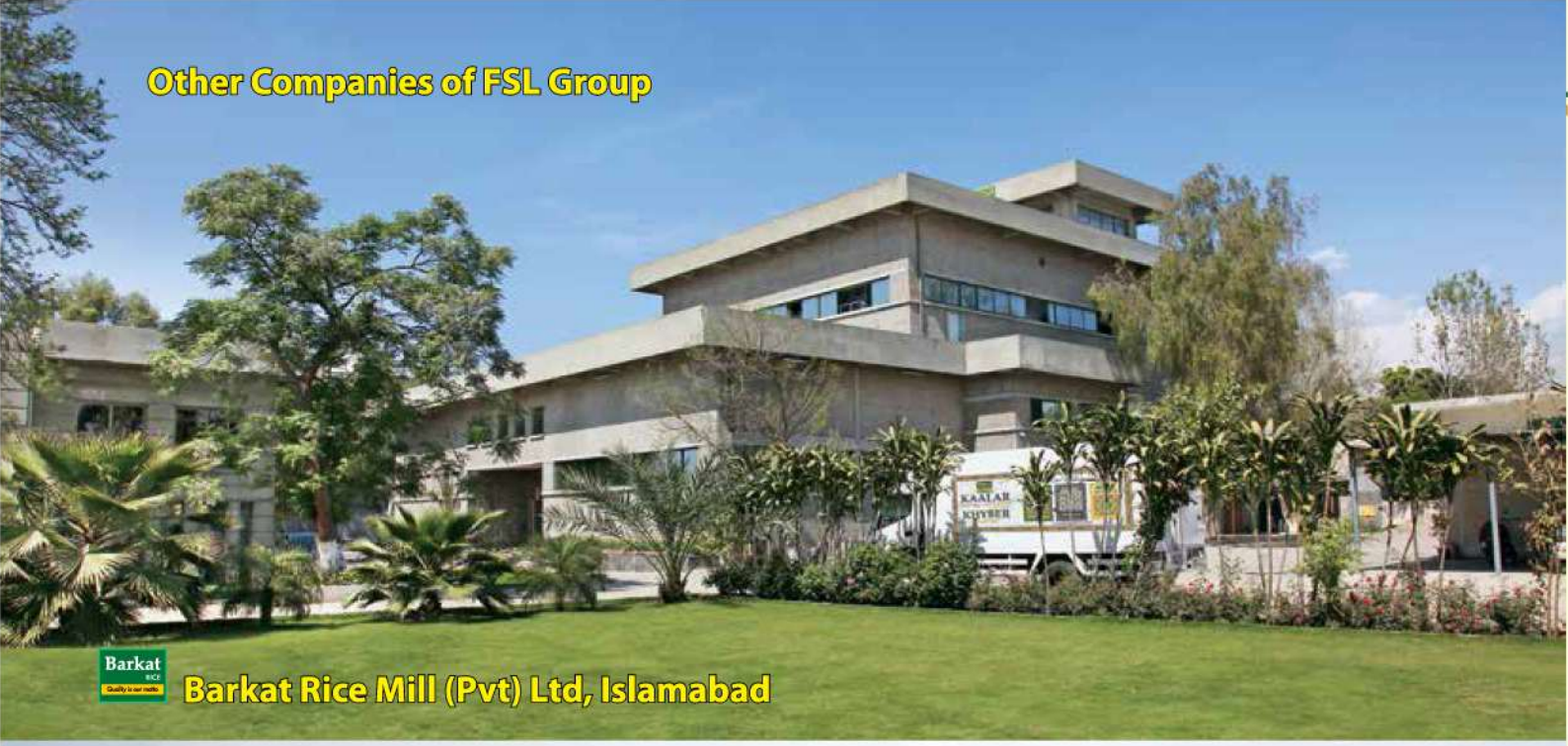
HRB – 400 CHINESE STANDARD

Nominal diameter (mm)	Nominal Cross sectional	Theoretical weight (kg/m) area (mm2)
6	28.27	0.222
8	50.27	0.395
10	78.54	0.617
12	113.1	0.888
14	153.9	1.21
16	201.1	1.58
18	254.5	2.00
20	314.2	2.47
22	380.1	2.98
25	490.9	3.85
28	615.8	4.83
32	804.2	6.31
36	1018	7.99

	Chemical composition %					
Trademark	C	Si	Mn	p	S	Ceq
HRB 335 HRBF 335	0.25	0.8	1.60	0.045	0.045	0.52
HRB 400 HRBF 400						0.54
HRB 500 HRBF 500						0.55

Trademark	Nominal diameter	Bending diameter
HRB 335 HRBF 335	6-25	3d
	28-40	4d
	>40-50	5d
HRB400 HRBF400	6-25	4d
	28-40	5d
	>40-50	6d
HRB500 HRBF500	6-25	6d
	28-40	7d
	>40-50	8d

Other Companies of FSL Group



Barkat Rice Mill (Pvt) Ltd, Islamabad

Barkat Rice Mill (Pvt) Ltd, Gujrat

Prospective View (Barkat Hightex, Faisalabad)

Barkat Hightex (Pvt) Ltd, Faisalabad

QHSE Policy

Fazal Steel (Pvt.)Limited team at all levels shall endeavor to ensure the satisfaction of all stakeholders by providing the best value in every product and services by recognizing that Quality, Health, Safety, Environment and Community responsibilities are an integral part of our operations.

We shall achieve this by:

- Establish & reviewing QHSE objectives & targets.
- Developing & implementing management structures and procedures.
- Monitoring, evaluating & continually improving our QHSE performance.
- Recognizing that QHSE is everyone's direct responsibility.
- Continually enhancing awareness, skills and system efficiency.
- Participating in product and process improvement initiatives, risk mitigation and prevention measures.
- Making each team member accountable for QHSE matters.
- Meeting all internal & external commitments.
- Abiding by the applicable legal framework requirements related to QHSE.
- Ensuring that the QHSE systems of our suppliers and the subcontractors are compatible with our own commitments.
- Exercising integrity and respect in dealing with each other, customers, suppliers and society at large.
- Communicating this policy to all stakeholders, providing training and encouraging behavior that upholds this policy.

Director

FAZAL STEEL (PVT) LIMITED

FSL STEEL™

Fazal Steel (Pvt) Limited

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