



PAKSOU



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PAKSOU

Projects Catalogue

Steel Making Division



PAKSOU

Results from
Innovation,
Reliability
And Partnership

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**PAKSOU
PROJECTS**

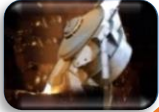
**PAKSOU
PRODUCTS**

**PAKSOU at a Glance
Projects & Products**

PAKSOU Design & Engineering Co. is one of the pioneering and reputable industrial companies in the country with 40 years of experience in design, construction and implementation. PAKSOU Design & Engineering Co. Designer and manufacturer of machinery and production lines for the casting industry, thermal and refrigeration products and industrial machinery offers its products and services worldwide.



Special Machinery & Single Purpose



Foundry Plants Casting Machine



Hydraulic Press & Metal Forming



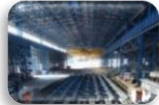
DE dusting System Scrubbers



Other Industrial Machinery



Steel Making & DRI Plants



PLATFORM (Support & Steel Structure)



Direct Reduction Iron (DRI)



Continuous Casting Machine (CCM)



Other Equipment's



Electric Arc Furnace (EAF Facilities)



CASTING



Discharge Area



TUNDISH Equipment's



PELLETIZING



CCM SPARE PARTS



MOULD EQ



Cutting



TUNDISH



Condensing Boiler & Condensing Wall Packages



Chiller, Mini Chiller, Cooling Tower



Air Handling Units



Expansion Tanks



Hydraulic Power Pack & Hydraulic Cylinders



Automatic UMBRELLA

The company is also active in designing and manufacturing equipment's for steel mills, direct reduction, material handling systems, pollutant absorption systems and dust transportation factories by employing highly qualified engineering team.

Designing and manufacturing of hydraulic presses, cranes and industrial machinery etc. is another part of PAKSOU Engineering activities.

Scope of Activities:

- Casting Industry
- Mining Industries, Steel Making and Reduction
- Machinery Industries
- Heating and Cooling / Air Conditioning (HVAC)
- Energy related industries (gas turbines, wind turbines)
- Special and single purpose industries
- Power Plant Industries
- Cement industry

References



- Platform for Casting Machines
- Electric Arc Furnace (EAF)
- Continuous Casting Machines (CCM)
- Direct Reduction Iron (DRI)
- Material Handling & Pelletizing



Customers

 PAMIDCO Paiti Ind'f'it'ion & Industri'el Development Complex	 MMTE	 PAMIDCO Paiti Ind'f'it'ion & Industri'el Development Complex	 MMTE	 PAMIDCO Paiti Ind'f'it'ion & Industri'el Development Complex	 MMTE	 فولابیر	 BIS CO.
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Electric Arc Furnace (EAF Facilities)

Important equipment made in steel contracts



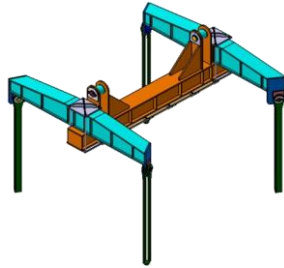
EAF

PAKSOU is one of the suppliers of Steel Making plants in IRAN that designs and manufactures part of the EAF Arc Furnace Steel Plant which, in cooperation with PAMIDCO, MMTE etc. has completed all stages Designing, engineering and preparation of workshop maps, supply of raw materials and construction.

List of Equipment's

List of equipment's made by PAKSOU in steel contracts including all stages of engineering and preparation of workshop drawings, supply of raw materials and construction done as follows.

- Shell Lifting Beam
- Roof Supporting Arm
- DRI Hopper & EBT Hopper
- Electrode Platform
- Walkway and Guardrails
- Sill Holder
- Movable Walkway for EBT
- Ladle Transfer Car



SHELL LIFTING BEAM



SHELL LIFTING BEAM



Roof Supporting Arm



DRI Hopper



EBT Hopper



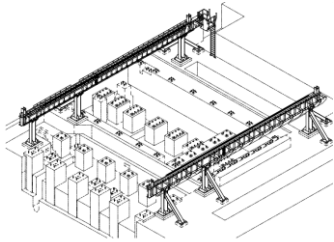
Ladle LF Transfer Car



Ladle LF Transfer Car

CCM Platform

Important equipment made in steel contracts



PLATFORM

The casting machine platform includes large and precision steel structures such as casting machine seats and supports, cooling chamber, steam exhaust ducts, staircases and corridors in steel mills.

List of Equipment's

List of equipment's made by PAKSOU in steel contracts including all stages of engineering and preparation of workshop drawings, supply of raw materials and construction done as follows.

- Steel Structure for Rigid Dummy Bar Storage Unit
- Support Structure for Cross Transfer
- Support Structure for Roller Apron
- Support Structure for WSU unit
- Support Structure for IRT
- Support Structure for TCM
- Support Structure for DRT Area
- Steel Structure Torch Cutting Unit
- Ductwork Cooling Chamber up to Steam Exhaust
- Ductwork Steam Exhauster up to roof SST
- Embedded Frame for Ladle Turret
- Emergency runner
- Ladle Slide gate Platform
- Ladle Shroud Manipulator Platform
- Ladle Turret Access Platform Foundation
- Cross Over
- Rails for TUNDISH Car
- Cooling Chamber
- Safety fence at TD car Plat access
- MOULD Operator Panel Mounting Structure



Support Structure for IRT to TCM



Support Structure for Cross Transfer Area



Steel Structure for Rigid Dummy Bar Storage Unit



Emergency Runner



Ductwork Steam Exhauster up to roof



Steel Structure for WSU Unit

CONTINUOUS CASTING MACHINE (CCM)

Important equipment made in steel contracts



CASTER MACHINE

The purpose of continuous casting is to convert straight steel melt to produce low-energy billet-type components with high quality and high yield coefficient and include the following operator sequences:

- Delivery of steel melt to cast strands
- Casting molding by cooling with water in a casting mold
- Cool the casting branches by spraying water from the bottom of the mold to the required length
- Withdrawal and straightening castings
- Cutting and leaving the casting piece

After leaving the cooling chamber, the strands reach the output and smoothing section, where the radius of the strand changes from the desired value in the casting to the horizontal. By cutting the buckets to the desired size in the cutting table section, the final product (billet, bloom or slab) is directed to the outlet of the cooling bed and then to the packaging. This section includes a variety of roller bearings and product conveying machines, cooling substrates and product storage.



Discharge Area Equipment's



Cutting Equipment's



Casting Equipment's



Mould Maintenance



TUNDISH & TUNDISH Equipment's

List of Equipment's

List of equipment's made by PAKSOU in steel contracts including all stages of engineering and preparation of workshop drawings, supply of raw materials and construction done as follows.

Discharge Area Equipment's

- Discharge Roller Table - *Single Roller* up to Cross Transfer
- Discharge Roller Table - *Common Roller* (at Cross Transfer)
- Discharge Roller Table - *Transfer Roller Table*
- Retractable Stop
- End Stop 1
- Billet Shifter
- Turnover Cooling Bed
- Intermediate Cooling bed
- Billet Storage Bank with Packing Device
- Cooling Tunnel before WSU
- Transfer Roller Table
- Package Retractable Stop
- Retractable Stop

Cutting Equipment's

- Crop-end Chute
- Crop-end Bucket
- Sample Bucket
- Sample Collecting System

Mould Maintenance

- Ladle Trunnion Guide
- Mould Trestle with Pressure Testing
- Mould Canopy and Mould Cover
- Mould Trestle
- Mould Quick Change Device
- Mould Transport and Storage Stand
- MLC (Gauge)
- Flushing Tools for Mould Water

Casting Equipment's

- Rigid Dummy Bar Storage Unit
- Ladle Shroud Manipulator
- Storage Rack
- Emergency Launder
- Intermediate Roller Table
- Crop-end Pinch Roll
- Guiding System for Strand and RDB

TUNDISH & TUNDISH Equipment's

- TUNDISH
- Emergency Box for TUNDISH
- TUNDISH Cover
- TUNDISH Tilting Station
- TUNDISH Nozzle Setting and Relining Stand
- TUNDISH Nozzle Gauge
- TUNDISH Support Stand
- TUNDISH Drying station Support Stand
- TUNDISH Transport Bail
- TUNDISH Stopper Store and Transport Rack

CONTINUOUS CASTING MACHINE (CCM)

Important equipment made in steel contracts

Casting Equipment's

References



Rigid Dummy Bar Storage Unit



Rigid Dummy Bar Storage Unit



Rigid Dummy Bar Storage Unit



Rigid Dummy Bar Storage Unit



Guiding System for Strand and RDB



Guiding System for Strand and RDB



Guiding System for Strand
and Cooling Chamber



Crop-end Pinch Roll

CONTINUOUS CASTING MACHINE (CCM)

Important equipment made in steel contracts



CONTINUOUS CASTING MACHINE (CCM)

Important equipment made in steel contracts

Discharge Roller Equipment's

References



Cooling Tunnel & Intermediate Roller



Discharge Roller Table (Common Roller)



Billet Shifter Machine



Discharge Roller Table –
Transfer Roller



Discharge Roller Table –
Single Roller



Discharge Roller Table –
Single Roller



Discharge Roller Table –
Single Roller

CONTINUOUS CASTING MACHINE (CCM)

Important equipment made in steel contracts

Discharge Roller Equipment's

References



Package Retractable Table



Billet Storage Bank

CONTINUOUS CASTING MACHINE (CCM)

Important equipment made in steel contracts

Discharge Roller Equipment's

References



Turn over Cooling Bed



Turn over Cooling Bed



Turn over Cooling Bed

Cylinder Support

CONTINUOUS CASTING MACHINE (CCM)

Important equipment made in steel contracts

TUNDISH & TUNDISH Equipment's References



TUNDISH



TUNDISH Transport Bail



TUNDISH



TUNDISH TILTING STATION



TUNDISH TILTING STATION



**TUNDISH Stopper Store
and Transport Rack**

CONTINUOUS CASTING MACHINE (CCM)

Important equipment made in steel contracts

References



Expansion Tank



Lime & Carbon Storage Bin



Sample Bucket



Crop End Chute



Mould Trestle



Mould Canopy & Mould Cover



Ladle Trunnion Guide



Torch Cutting Machine

Direct Reduction Iron (DRI
Plant)

Important equipment made in steel contracts (Gates)

References



Motorized Diverter Gate



Motorized Slide Gate



Product Truck Bin
Discharge Gate



Static Chute



Static Chute



Pneumatic Diverter Gate



Pneumatic Flap Gate



Product Truck Bin
Discharge Gate



Swiveling Chute



Special Gear Box

Direct Reduction Iron (DRI
Plant)

Pellet Lime Coating System

References



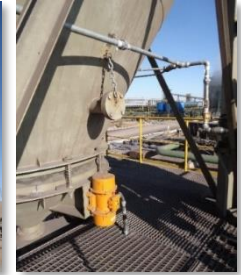
Pellet Lime Coating System



LOSS-IN-WEIGHT FEEDER



BIN & Structure



Bin ACTIVATOR

Pellet Lime Coating System

The high temperature of the reducing gas increases the efficiency of the reduction process, but this high temperature causes the surface melts of the pellets, resulting in the pellets sticking together and forming clusters. This reduces the quality of resuscitation in them. To prevent surface melting of pellets and increase their melting temperature, a thin layer of lime water containing 0.5 to 5.2 kg per ton of pellets is sprayed on the material. This is done by the Lime Coating System located before the furnace.

The lime water is poured into the storage tank by a pneumatic system and sprayed on the pellets by a feeder valve.

PAKSOU Company with experience in designing and manufacturing of sponge iron liming system with the aim of achieving a high quality feedstock for direct reduction iron ore recovery system (DRI), With 100 cubic meter tank of lime storage and steel structure and related platform as well as below tank equipment including the following, has acceptable technical capability in this field.

- 1- Lime Extraction System (Bin Activator)
2. Slide Gate Electromechanical and Gate
3. Loss-in-weight Feeder Lime Weighing System
- 4- Feeding system based on weight of transfer pellet (Metering Screw feeder)
5. Water and lime mixing system (with specified percentage) and spraying on pellets on E-ductor
- 6- Automation control and system (HMI, PLC), power panel and instrumentation
- 7- Piping & Wiring



LOCAL CONTROL PANEL

Pelletizing Machines

Stacker & reclaimer Equipment's

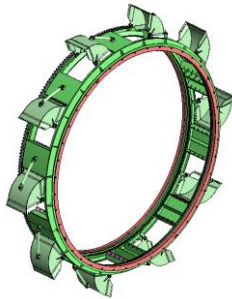


Reclaimer

Reclaimer is a mobile arm that takes the stored materials out of the warehouse by exfoliation and goes through the depot end to end with each exfoliation. With these definitions, the materials that are removed by the reclaimer are poured on the conveyor belts on both sides of the depot, and then the work of transferring them to the place of consumption begins. This machine has a wheel on the tip of its arm with a number of shovels that can pick up material from the warehouse and pour it onto the arm conveyor. One of the features of this machine is that it can rotate around vertical and horizontal axes.

List of Equipment's

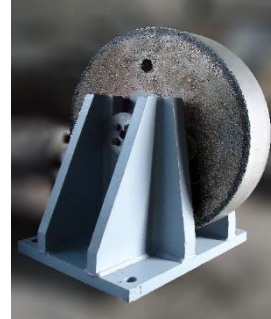
List of equipment's made by PAKSOU in steel contracts including all stages of engineering and preparation of workshop drawings, supply of raw materials and construction of Sprockets for Bucket wheel of the Reclaimer done as follows.



Bucket Wheel

- Bucket Wheel Reclaimer
- Supporting Roller of Annular
- Annular Wheel
- Chain Wheel
- Guiding Wheel Set
- Trolley Travelling Wheel
- Sprocket

Important equipment made in steel contracts



Supporting Roller of Annular



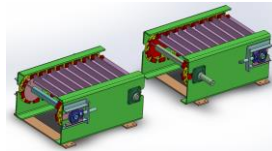
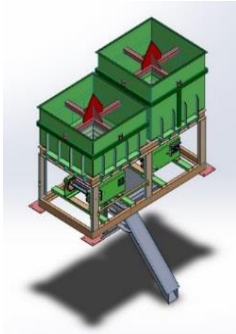
Annular Wheel



Guiding Wheel set



R-claimer Wheel



Round Link Chain

Automatic Discharge Hopper

Automatic Discharge Hopper is used to charge the FERRO Alloy into the LF and EAF Furnaces.

This device has the following features:

- Capability to save and weighing two materials
- This device has Automation system for Discharge & weighing system
- The material handling system is Horizontal Chain conveyor (Round Link chain)
- It has swiveling chute by capability of 360 degree rotation
- The hopper has lining of HARDOX plates

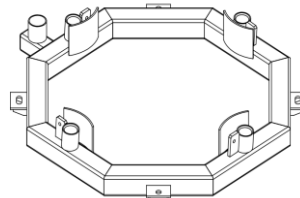
References



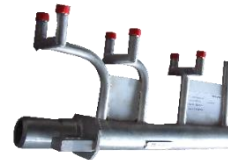
CCM Spare Parts

CCM ACCESSORIES

- Water Spray Tube
- Water Spray Nozzle
- CONSEAL Parts
- DUMMY BAR
- TUNDISH & TUNDISH Cover
- MOULD Equipment's
- Rollers

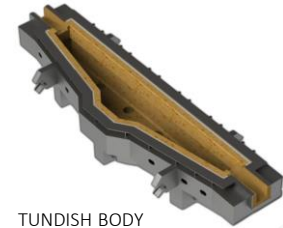


Water Spray Ring



Spray Tube Zone 1

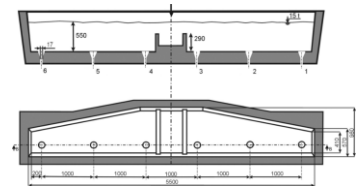
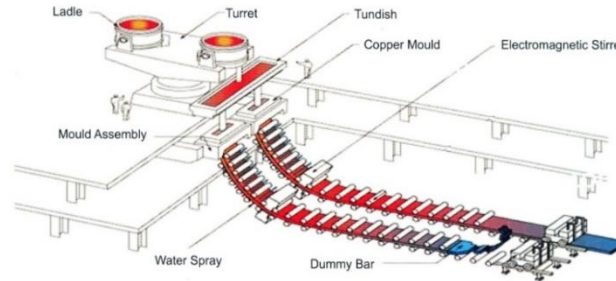
TUNDISH & TUNDISH Cover



TUNDISH BODY



TUNDISH Cover



Water Spray Tube



The spray ring in zone 1 is connected directly below the mould support. It consists 4 rows with spray nozzles to allow a uniform cooling process of the billet leaving the mould.
The upper two rows are equipped with 8 nozzles each row, the lower two rows with 4 nozzles each row.



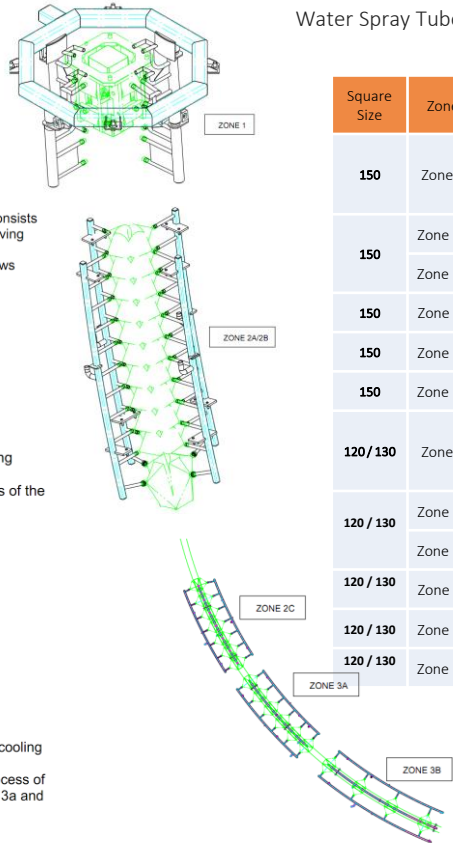
The spray ring system in zone 2a/2b is installed to the structure in cooling chamber.
It consists 10 rows with spray nozzles to allow a uniform cooling process of the billet leaving the mould. All rows are equipped with 4 nozzles each row.



The spray ring system in zone 2c and 3a/3b is installed to the structure in cooling chamber.
It consists totally 17 rows with spray nozzles to allow a uniform cooling process of the billet leaving the mould. 7 rows are installed in zone 2c, 6 rows in zone 3a and 4 rows in zone 3b. All rows are equipped with 4 nozzles each row.

Spare Parts

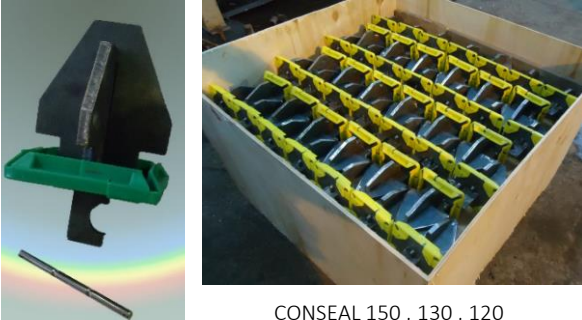
Water Spray Tubes



Square Size	Zone	Material	Row (Number of Rows)	Nozzle Type	Angle (H/v)	Flow @2.8 bar	Number per Face
150	Zone 1	AISI 304	1	Water Only Round (WR)	45/45	7	2
		AISI 304	2		45/45	7	2
		AISI 304	3		45/65	7	2
		AISI 304	4		65/65	7	1
150	Zone 2a	AISI 304	9	Water Only Round (WR)	65/65	5	1
	Zone 2b	AISI 304	1	Water Only Rectangle (WRe)	45/90	5	1
150	Zone 2c	AISI 304	7	Water Only Rectangle (WRe)	45/90	3.5	1
150	Zone 3a	AISI 304	6	Water Only Rectangle (WRe)	45/90	3	1
150	Zone 3b	AISI 304	4	Water Only Rectangle (WRe)	45/90	2.5	1
120 / 130	Zone 1	AISI 304	1	Water Only Round (WR)	45/45	7	2
		AISI 304	2		45/45	7	2
		AISI 304	3		65/65	7	1
		AISI 304	4		65/65	7	1
120 / 130	Zone 2a	AISI 304	10	Water Only Round (WR)	65/65	5	1
	Zone 2b	AISI 304	1	Water Only Rectangle (WRe)	45/90	5	1
120 / 130	Zone 2c	AISI 304	7	Water Only Rectangle (WRe)	45/90	3.5	1
120 / 130	Zone 3a	AISI 304	6	Water Only Rectangle (WRe)	45/90	3	1
120 / 130	Zone 3b	AISI 304	4	Water Only Rectangle (WRe)	45/90	2.5	1

Spare Parts

CONSEAL Parts



CONSEAL 150 , 130 , 120

Application

The CONSEAL parts in the process of melting are consumable and sacrificial parts in continuous casting. When casting the billet, they are used to tract and lead it in the casting direction.

Features

These pieces are mounted on the DUMMY BAR and their Dimensions are varies according to MOULD size (120x120 , 130x130 & 150x150)

DUMMY Bar



Application

The DUMMY Bar is used to tract and lead the cooled and solidified strand and pull it out by the withdrawal and straightening Machine.

Features

In order to avoid the deformation of dummy bar body due to heating, the dummy bar is equipped with a cooling water pipe inside the bar body. It has the feature of smaller deformation, long service life, simple structure and installation, easy operation and maintenance.

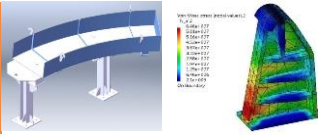
Main Technical data

Outer bow radius of bar body: R4000mm, R5250mm, R7000mm, R8000mm
 Section dimension of bar body:
 90×90mm;100×100mm;120×120mm;150×150mm;160×160mm;170×170mm;
 180×180mm;180×240mm;135×400mm;Ø100×100mm; Ø120×120mm

SERVICES

Engineering & Designing Services

- Mechanical component design and providing 3D Models in the CATIA, Solidworks & 2D drafting in AutoCAD Software.
- Providing the mechanical equipment's documents & inspection forms.
- Mechanical element analysis in ANSYS software.
- Providing technical proposal and offering the technical specifications.
- Industrial Automation



Process Consultancy Layout Study Project Management Services

PAKSOU know-how and professional experts provide the best customized solutions to successfully develop and put into operation new projects. Our experts provide advice on selection of the most suitable equipment carry out start-up and ensure ...

PAKSOU provides comprehensive project management services including planning cost estimation, project control and monitoring of design, procurement, construction, installation and commissioning processes.



Machining , Welding , Cutting Press Shop, Rolling Services

PAKSOU company uses the facilities and spaces available in Irfo company with an area of about 18000 square meters, for the manufacture and production of its parts.



Procurement Manufacturing Erecting & Commissioning Services

Our commercial department team will assist you supplying the cost effective devices and equipment.

PAKSOU Covering a variety of industries from food processing to Steel Complexes. Working in these industries has allowed us to develop best solution,



Quality Control Services

PAKSOU company's quality control, by monitoring and controlling the production cycle, puts two important and general principles of quality and customer orientation at the forefront of its work and firmly believes in it, and to achieve these goals, continuously on the process of supplying materials and equipment, production processes The product and the provision of customer satisfaction (fulfilling the needs and demands of the customer) have full supervision and control.



Turn-Key Projects Services

PAKSOU, relying on its highly trained and specialized personnel, as a pioneer in industrial projects, provides key services. We guarantee the existence of highly experienced engineers and loyal customers over 30 years of service.

Planning, Engineering, Project Management, Manufacturing, Erection & Commissioning Training and services after sale



Manufacturing & Inspection Facilities

S/n	Equipment	Made	Specification
1	Lath	Poland & Bulgarian	Ø2000 x6000
2	Lath	Poland & IRAN	Ø250 x1500*3000
3	Grounding	IRAN	700 x 1300
4	Boring	Russian	1000x900x900
5	Radial Drill	Czech	2000
6	Spark	IRAN	800x800
7	CNC Cutting (2D)	IRAN	2000x6000
8	Welding Equipment's	IRAN	Rectifier & Co2 & Plasma
9	Crane	IRAN	2 ~ 25 Tones
10	Compressor	IRAN	120 ~ 900 CFM
11	Quantometer	Germany	For Aluminum Alloy & Cast Iron & Carbon Steel
12	Hardness Meter	Germany	According to Rockwell – BHN - VH
13	Tensile Test	IRAN	---
14	Gas Analyzer	Germany	O2 – CO – Co2 Gas



Customers

 <p>MMTE شرکت معدنی فی ایزدستان استان و قزاق</p>	 <p>وزارت صنعت، بازرگانی و منابع معدنی جمهوری اسلامی ایران</p>	 <p>ایرفو</p>
 <p>شرکت توسعه فولاد ایران S.A. - ISTEEL STEEL & METALWORKS CO.</p>	 <p>وزارت نیرو جمهوری اسلامی ایران</p>	 <p>یامیرکو گروه صنعتی فولاد مسان سازمان پیمان</p>
 <p>BIS CO. شرکت فولاد بونای ایرانیان</p>	 <p>وزارت صنایع فلزی جمهوری اسلامی ایران</p>	 <p>گوه مینا</p>



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SCAN ME