METCO INOX LLP

❖ **ORE & CONCENTRATES**

- IRON ORE
- ROASTED IRON PYRITES
- MANGANESE ORE
- CHROME ORE
- ROASTED MOLYBDEUM ORE & CONCENTRATE,
- VANADIUM PENTOXIDE

IRON ORE

Iron ore is found in nature in the form of rocks, mixed with other elements. By means of various industrial processes incorporating cutting-edge technology, iron ore is processed and then sold to steel companies. The steel made from iron ore is used in construction, automobile manufacturing, and other industrial applications.

Iron ore blast furnance grade Pellets	
Typical Specifications	
Fe	**64.00%**
FeO	0.50%
$SiO_2 + Al_2O_3$	7.00%
S	0.01%
P	0.05%
TiO_2	0.20%
AS	0.01%
Other metals	0.20%
CaO + MgO	2.00%
Basicity	0.30

ROASTED IRON PYRITES

The typical chemical composition of the Roasted iron pyrites (not guaranteed) on DMT basis, which shall mean dry metric ton; mass of the product after free moisture loss at 105 degrees Centigrade ("DMT"), is the following.

Roasted iron pyrites	
Specifications	
Fe	65.00% min
FeO	4.00% min
SiO2	2.00% min
Al2O3	0.30% min
CaO	0.30% min

The typical physical properties on natural basis of the Roasted iron pyrites is the following:

Size	Typical
<150 micron	97.0%
<75 micron	64.5%
<45 micron	38.0%

MANGANESE ORE:-

A gray-white brittle metallic element, alloyed with steel to increase strength, hardness, wear resistance, and other properties and with other metals to form highly ferromagnetic materials.

Manganese Ore	
Specifications	
Mn	40.00% min
Fe2O3	5.00% min
P	0.10% max
SiO2	15.00% max

CHROME ORE

Sinter Chrome ore	
Specifications	
Cr2O3	43.50% Min
Iron (Fe)	17.8% typical
Al2O3	14.00% max
MgO	13.00% max
SiO2	5.00% max
CaO	1%max
Sulphur	0.006% max
Phosphorus	0.004% max
Cr:Fe	1.6:1
Size	10-15 mm(90% min)

ROASTED MOLYBDENUM CONCENTRATE

Roasted Molybdenum concentrate also known as Technical Molybdenum Oxide is Mo containing intermediary product being produced by roasting at air temperatures of Molybdenum Disulphide (MoS2) concentrate (typical MoS2 content 85-92%, S ab. 35-37%). The resulting roasted Mo concentrate typically contains minimum ab. 57% molybdenum, and less than 0.1% S. Between 30-40% of Global Technical Mo Oxide production is processed into Ferromolybdenum and ab. 25-30% into different chemical products (Chemically pure Molybdic Oxides and Molybdates).

Roasted Moly Ore & Concentrates	
Specifications	
Mo	57.00 % Min
S	0.10% max
C	0.10% max
Cu	0.50% max
P	0.05% max
Pb	0.05% max
Size	10x50mm (90%min)

Significant part of Technical Molybdenum Oxide is also used for direct alloying of steel with Molybdenum in EAF and Converter type furnaces (to achieve Mo content in EAF furnaces up to 3% and up to 1% in Converter-type furnaces). Compared with Ferromolybdenum, Technical Molybdenum oxide preferences are lower cost and quicker dissolution rate.

VANADIUM PENTOXIDE

Vanadium(V) oxide (vanadia) is the inorganic compound with the formula V2O5. Commonly known as vanadium pentoxide, it is a brown/yellow solid, although when freshly precipitated from aqueous solution, its colour is deep orange. Because of its high oxidation state, it is both an amphoteric oxide and an oxidizing agent.

Roasted iron pyrites	
Specifications	
V2O5%	98.50% Min
Silicon (Si)	0.12% Max
Iron (Fe)	0.05% Max

❖ **BASE METALS**

- ALUMINIUM
- NICKEL
- ZINC
- COPPER
- LEAD
- TIN

ALUMINIUM

Aluminium Ingots are produced through smelting process. Ingots are material that are cast into shape suitable for further processing. Various grades of ingots are produced which are used for production of castings in Auto industry as well as electrical applications. Ingots are re-melted & further processed into a large number of products for various downstream applications.

LME PRIMARY ALUMINIUM	
Specifications	
Si	0.10%
Fe	0.20%
Zn	0.03%
Ga	0.04%
V	0.03%
ALUMINIUM	REMAINDER

NICKEL

Nickel is a chemical element with symbol Ni and atomic number 28. It is a silvery-white lustrous metal with a slight golden tinge. Nickel belongs to the transition metals and is hard and ductile. Pure nickel, powdered to maximize the reactive surface area, shows a significant chemical activity, but larger pieces are slow to react with air under standard conditions because an oxide layer forms on the surface and prevents further corrosion (passivation). Majority of Nickel is used to make Stainless Steel, followed by plating and recently there has been multi fold increase in the usage for making batteries for Electric vehicle.

Nickel Traded:

- **Nickel Cathodes (Uncut / Cut)**
- **Nickel Briquettes**

Ni Cut Cathodes 4X4/ Uncut Cathodes/ Briquettes	
Specifications	
Ni	99.80% Min
Co	0.15% Max
Cu	0.02% Max
C	0.03% Max
Fe	0.02% Max
S	0.01% Max

ZINC:

Zinc is a chemical element with symbol Zn and atomic number 30. It is the first element in group 12 of the periodic table. In some respects zinc is chemically similar to magnesium: both elements exhibit only one normal oxidation state (+2), and the Zn2+ and Mg2+ ions are of similar size. Zinc is the 24th most abundant element in Earth's crust and has five stable isotopes. Zinc's major application in Galvanizing industry to make structural, Auto bodies corrosion resistant, followed by production of alloys with Copper for utensils and decorative architectural product, in Western countries the roofing material was of pure Zn sheets which got substituted by Galvanized steel sheets.

Special High Grade Zinc	
Specifications	
Zn	99.995% min
Pb	0.003% max
Cd	0.003% max
Fe	0.002% max

High Grade Zinc	
Specifications	
Zn	99.97% min
Pb	0.0220% max
Cd	0.0045% max
Fe	0.0020%max
Cu	0.0030%max

COPPER:

Copper is a chemical element with symbol Cu (from Latin: cuprum) and atomic number 29. It is a soft, malleable, and ductile metal with very high thermal and electrical conductivity. A freshly exposed surface of pure copper has a reddish-orange color. Copper is used as a conductor of heat and electricity, as a building material, and as a constituent of various metal alloys, such as sterling silver used in jewelry, cupronickel used to make marine hardware and coins, and constant used in strain gauges and thermocouples for temperature measurement. Due to it's excellent conductivity and ductility, the major use is for production of Electric cables, followed by production of Cu alloys, like Brass, Bronze and Cupronickel.

LME Registered / Non LME Registered Cathodes

CU-CATH-1 (NUMBER CR001A)	
Specifications	
Cu	REMAINDER
Ag	0.0025 max
As	0.0005 1) max
Bi	0.00020 2) max
Cd	-1) max
Co	-3) max
Cr	-1) max
Fe	0.0010 3) max
Mn	-1) max
Ni	-3) max
P	-1) max
Pb	0.0005 max
S	0.0015 4) max
Sb	0.0004 1) max
Se	0.00020 2) max
Si	-3) max
Tin	-3) max
Te	0.00020 2) max
Zn	-3) max
Sum of elements listed in this table other than copper	0.0065 max

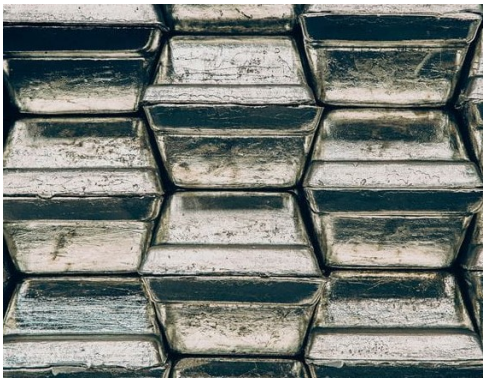
LEAD:

Lead is a chemical element with symbol Pb (from the Latin plumbum) and atomic number 82. It is a heavy metal that is denser than most common materials. Lead is soft and malleable, and has a relatively low melting point. When freshly cut, lead is silvery with a hint of blue; it tarnishes to a dull gray color when exposed to air. Lead has the highest atomic number of any stable element and three of its isotopes each conclude a major decay chain of heavier elements.It's main use is in making the Acid storage Auto batteries, followed by the Armament industry, Lead is also used to make the covers for underground Copper conductors.

LEAD – MATERIAL NUMBER PB970R	
Specifications	
Indicative Pb content	99.97
Ag	0.005
Arsenic	0.001
Bi	0.03
Cd	0.001
Cu	0.003
Ni	0.001
Sb	0.001
Sn	0.001
Zn	0.0005
Total	0.03
NOTE 1 – Indicative lead content: 100 – (total impurities)	

TIN:

Tin is a chemical element with the symbol Sn (from Latin: stannum) and atomic number 50. It is a post-transition metal in group 14 of the periodic table. It is obtained chiefly from the mineral cassiterite, which contains stannic oxide, SnO_2. Tin shows a chemical similarity to both of its neighbors in group 14, germanium and lead, and has two main oxidation states, +2 and the slightly more stable +4. Tin is the 49th most abundant element and has, with 10 stable isotopes, the largest number of stable isotopes in the periodic table, thanks to its magic number of protons with it's shine the tin coating is very popular to produce packaging of food industry and in Artificial Jewelry.



LME TIN, BS EN 610:1996	
Specifications	
Sn	99.85 (min)
Al	0.001 max
As	0.03 max
Bi	0.03 max
Cd	0.001 max
Cu	0.05 max
Fe	0.01 max
Pb	0.05 max
Sb	0.05 max
Zn	0.001 max
Total of all impurities (maximum)	0.15 max

- **FERRO ALLOYS**
    - FERRO NICKEL
    - FERRO NICKEL MOLY
    - FERRO MOLYBDENUM
    - FERRO CHROME
    - FERRO VANADIUM
    - FERRO TITANIUM
    - FERRO MANGANESE
    - FERRO SILICON
    - FERRO NIOBIUM
    - CHROMITE SAND

Ferro Nickel

Ferronickel is a ferroalloy that contains approximately 35% nickel and 65% iron. It is majorly used in the stainless and heat-resistant steels industry.

Ferro Nickel (Ni 17% & above)	
Specifications	
Ni	17.00% min
C	3.00% max
P	0.03% max
Cu	0.1% max
Cr	2.5%max
Si	4.00% max
Mn	0.2% max
S	0.03% max
Co	1/30 Ni max

Ferro Nickel Granules	
Specifications	
Ni	20.00% min
C	0.040% max
Co	0.50% - 0.85%
Si	0.40% max
S	0.06% max
Ferrous	Balance
size	2-70mm

Ferro Nickel Moly

Ferro Nickel Moly provides a cost savings to customers through its replacement of virgin nickel and molybdenum products. It is used to produce NiMo stainless steel such as Type 316, Type 317, and Types T-318 and T-319,etc

FERRO NICKEL MOLY GRANULES	
Specifications	
Ni	15.00% min
Mo	35.00%
Cu	1.80% max
Co	2.9% max
P	0.10%max
Si	0.20% max
C	0.12% max
S	0.15% max
Size	4-50mm (90%min)

Ferro Molybdenum:-

Ferro molybdenum is an important iron-molybdenum metal alloy, with a molybdenum content of 60-75%. It is the main source for molybdenum alloying of HSLA steel.

Ferro Molybdenum	
Specifications	
Mo	60.00% min
Cu	0.5% max
Si	1.5% max
C	0.1% max
S	0.08% max
P	0.05% max
Al	0.5% max
Size	10x50 mm(90% min)

Ferrochrome

Ferrochrome (FeCr) is a chrome and iron alloy containing 50% – 70% of chrome by weight. Metco Inox deals in Ultra Low Carbon Ferro Chrome , Low Carbon ,Medium Carbon & High Carbon Ferro Chrome, Charge Chrome.

Low Carbon Ferro Chrome	
Specifications	
Cr	73.00% min
Si	1.00% max
C	0.03% max
P	0.025% max
S	0.015% max
N	0.05% max
Size	5-50mm(93% min)

Extra High Carbon Ferro Chrome	
Specifications	
Cr	67.00% min
Si	1.00% max
C	9.00% min
P	0.030% max
S	0.05% max
Fe	Balance
Size	0-10mm(90% min)

High Carbon Ferro Chrome(ULP)	
Specifications	
Cr	63.00% min
Si	1.50% max
C	8.5% max
P	0.015% max
S	0.05% max
Fe	Balance
Size	10-50mm(90% min)

High Carbon Ferro Chrome(Low Ti)

Specifications	
Cr	63.00% min
Si	1.00% max
C	8.50% max
P	0.02% max
S	0.05% max
Ti	0.03% max
Fe	Balance
Size	10-50mm(90% min)

Ferro Vanadium

Ferrovanadium is an alloy formed by combining iron and vanadium with a vanadium content range of 35–85%.Ferro Vanadium when added to an alloy gives stability against alkalis as well as sulphuric and hydrochloric acids. Ferro Vanadium also helps in avoiding of Corrosion to Steel. It also helps in increasing of Tensile Strength of Steel, Casting & Welding Electrodes.

Ferro Vanadium(75% min)	
Specifications	
V	75.00% min
C	0.20% max
Si	1.5% max
S	0.05% max
P	0.05% max
SIZE	10-50mm(90% min)

Ferrotitanium

Ferrotitanium is a ferro-alloy whose titanium content may vary between 15% and 75%. It is used in the iron and steel industry as a purifying and deoxidising agent for steel alloys.

FeTi (Ti 68.00% min)	
Specifications	
Ti	68.00% min
C	0.15% max
Si	3.00% max
P	0.1% max
S	0.06% max

Ferromanganese

Ferromanganese is a ferro-alloy having a high manganese content. The specific North American standard, ASTM A99, is intended to make a distinction between standard, medium-carbon and low-carbon ferromanganese.

Ferro Manganese Medium Carbon	
Specifications	
Mn	78.00% min
C	1.5% max
Si	1.00% max
S	0.03% max
P	0.15% max
Fe	Balance

Ferro Manganese High Carbon	
Specifications	
Mn	76.00% min
C	7.5% max
Si	0.5% max
S	0.02% max
P	0.1% max
Fe	Balance

Ferrosilicon

Ferrosilicon is an iron and silicon alloy whose average silicon content lies between 15% and 90%.

Ferro silicon (75%min) Lumps	
Specifications	
Si	75.00% min
Al	2.00% max
C	0.20% max
S	0.03% max
P	0.05% max
Size	10 x 100mm(90% min)

Ferro silicon (70%min) Lumps	
Specifications	
Si	70.00% min
Al	3.00% max
C	0.25% max
S	0.02% max
P	0.25% max
Fe	Balance
Size	10mm & down

Ferroniobium

Ferroniobium is an alloy whose niobium content is 60-70%. It is the main niobium alloy source of the HSLA steel and it covers over 80% of the worldwide niobium production.

Ferro Niobium	
Specifications	
Nb	65.00% min
Al	0.50% max
Ta	0.25% max
P	0.15% max
C	0.10% max
S	0.10% max
Si	3.00% max
Fe	Balance
Size	10x100(90% min)

Chromite Sand

Chromite Sand is a naturally occurring spinel consisting primarily of the oxides of chrome and iron It is by far the most industrially important mineral for the production of metallic chromium, used in the production of Stainless and Tool Steel. It is also used as a refractory material because of its high heat stability. .

Application: Used in high duty grey iron and steel foundries as core and mould making sand, in steel production it is used as a filler, used for production of green glass beverage containers.

Chromite sand	
Specifications	
Cr2O3	46.00% min.
FeO	26–30%
Al2O3	15-16%
SiO	1.00% max
Cr/Fe ratio	1.5 min
MgO	9-10%
AFS	35-40; 45-50, Etc

- **MINOR METALS :-**
- CHROMIUM METAL
- SILICON METAL
- MANGANESE METAL(FLAKES/ BRIQUETTES)
- MAGNESIUM
- COBALT
- CADMIUM
- CALCIUM SILICIDE

Metco Inox is selling minor metals on the main target markets and is in contact with the main consumers.

For more information on our offer, on the materials we deal with or for a quotation on minor metals, please fill in the form on this page: we will answer you as quickly as possible.

CHROMIUM METAL:-

Chromium Metal	
Specifications	
Cr	99.00% min
S	0.02% max
N	0.04% max
Size	5x50 mm(93% min)

SILICON METAL:-

(NORMALLY IN LUMPS)

Silicon Metal-553	
Specifications	
Si	98.50% min
Fe	0.5% max
Al	0.5% max
Ca	0.3% max

Silicon Metal-441	
Specifications	
Si	99.00% min
Fe	0.4% max
Al	0.4% max
Ca	0.1% max

MANGANESE METAL(FLAKES & LUMPS)

ELECTROLYTIC MANGANESE METAL	
Specifications	
Mn	99.70% min
C	0.04% max
P	0.005% max
S	0.05% max

MAGNESIUM(INGOTS)

Magnesium Ingots	
Specifications	
Magnesium	Mg-99.8% Min.

COBALT(INGOTS/CHIPS):-

Cobalt Ingots	
Specifications	
Co	99.3% min

Cobalt Chips	
Specifications	
Co	Co- 99.8 % min

CADMIUM(STICKS)-

Cadmium Sticks	
Specifications	
Cd	99.96% min or 99.99% min

CALCIUM SILICIDE(GRANUALS LUMPS/ POWDER/ CORED WIRE):-

Calcium Silicide	
Specifications	
Ca	25.00% min
Si	60.00% min

5.SCRAPS:

- **STAINLESS STEEL SCRAPS :-**
  - 200 SERIES
  - 300 SERIES
  - 400 SERIES
  - DUPLEX STEEL 2205/2507
  - 17/4PH & 15/5 PH SCRAP
  - ZURIK SCRAP

- **HIGH NICKEL & ALLOY STEEL SCRAP**

- INCONEL
- MONEL
- HASTALLOY
- WASPALLOY
- SMO-254
- LOW ALLOY SCRAP

- **TOOL STEEL SCRAP**

- H-11
- H-13
- P91
- P92
- MANGANESE STEEL SCRAP
- HSS

- **FERROUS SCRAPS**
- **OTHER SCRAPS**

- **STAINLESS STEEL SCRAPS :-**

SS 200 SERIES SCRAP

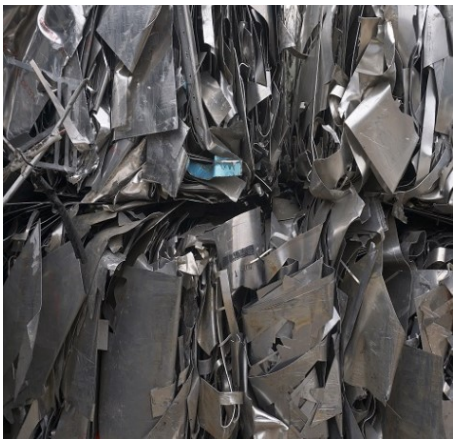
Series 200 is characterized by being a chrome- and manganese-based alloy, whose nickel percentage is lower than in series 300.

204Cu scrap is characterized by a copper content between 2% and 4%.

Metco Inox deals in both the purchase and sale of Series 200 scrap, Solids, turnings and grindings.

Grade 201 stainless steel has good formability, corrosion resistance, and fabricability. The following datasheet gives more details about grade 201 stainless steel.

Chemical composition:-



SS 201	
Specifications	
Cr	16.00% min
Ni	3.50% min
Mn	5.50% min

SS 300 Series

300 series is used in the nomenclature of austenitic stainless steel. It is the combination of carbon, chromium, nickel, and molybdenum. 300 series stainless steel grades offer versatile characters and widely used. It shows impressive corrosion resistance, strength, and impressive resistance at elevated temperatures.

Grades of 300 series

Grade 302HQ, 304, 309,310,316, 321/347

Grade 304 and grade 316 are the most commercial grades.

SS 304 Scrap:-

AISI 304 is a stainless steel alloy composed of chrome ranging between 18% and 20% and nickel between 8% and 11%; its density equals 7.9 kg/dm3. 304L is characterised by a lower carbon (C) content, less than 0.035%, whereas 304 can accept up to 0.080%.

This steel is also known as “18-8 stainless steel” and it is mostly used to make cookware and cutlery; the expression “18-8 stainless steel pans and pots” has become customary by now. 304 steel scrap is one kind of scrap mostly dealt with on worldwide markets.

SS 304 SHREDDED	
Specifications	
Cr	17.50% min
Ni	8.00% min
Fe	BALANCE

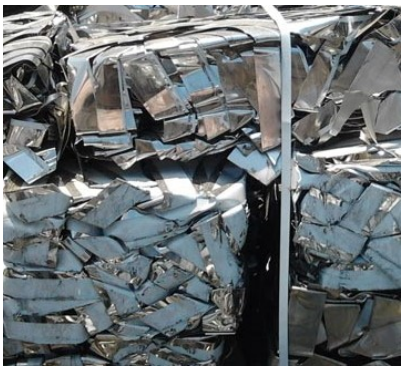
SS 316/316 L Scrap

AISI 316 is a stainless steel alloy composed of chrome ranging between 16% and 18%, nickel between 10% and 14% and molybdenum between 2% and 3%;

The presence of molybdenum increases the resistance to corrosion of the alloy in all natural surroundings: 316 or 316L stainless steel is largely used in the food and agro-food sector and it can be also applied in surroundings characterised by high humidity and salinity and, for this reason, it is widely used in the shipbuilding industry. Moreover, it is also used for screws for jewellery or for orthopaedic implants (for this reason, it is also referred to as “surgical steel”). 316 scrap is one kind of scrap mostly dealt with on the market: thousands of tons are handled each month.

SS 316/316 L	
Specifications	
Cr	16.50% min
Ni	10.00% min
Mo	2.00% min
Ferrous	BALANCE

SS 302 HQ Scrap



SS 302 HQ	
Specifications	
Cr	17.00% min
Ni	8.00% min
Cu	3.00% min
Ferrous	BALANCE

SS 309 scrap

Grade 309 stainless steel has high corrosion resistance and strength compared to 304 stainless steel. The following datasheet gives an overview of grade 309 stainless steel.

SS 309	
Specifications	
Ni	11.00% min
Cr	19.00% min

SS 310 scrap

Grade 310 is a medium carbon austenitic stainless steel, for high temperature applications such as furnace parts and heat treatment equipment. It is used at temperatures up to 1150°C in continuous service, and 1035°C in intermittent service. Grade 310S is a low carbon version of grade 310.

Typical Applications Grade 310/310S is used in fluidised bed combustors, kilns, radiant tubes, tube hangers for petroleum refining and steam boilers, coal gasifier internal components, lead pots, thermowells, refractory anchor bolts, burners and combustion chambers,ETC

Chemical Composition:-

SS 310	
Specifications	
Cr	24.00% min
Ni	19.00% min
Fe	Balance

SS 317 Scrap

CHEMICAL COMPOSITION:

SS 317	
Specifications	
Cr	18.00% min
Ni	11.00% min
Mo	3.00%
Fe	Balance

SS 321/347 Scrap

Grades 321 and 347 are the basic austenitic 18/8 steel (Grade 304) stabilized by Titanium (321) or Niobium (347) addition.

SS 321 / SS 347 SCRAP	
Specifications	
Cr	17.00% min
Ni	9.00% min
Fe	Balance

Grade 321H is a modification of 321 with higher carbon content, to provide improved high-temperature strength.

Series 400 scrap

Martensitic with ferritic consolidates 400 series. It is an amalgamation of carbon, chromium, and manganese. It endows the composite property of strength and high wear resistance.

Grades of 400 series

Grade 408, 409, 410, 416, 420, 430, 440, 446

We deal regularly with the purchase and sale of scrap and turnings of 430 stainless steel, also known as X6Cr17 and 1.4016.

AISI 430 is certainly one of the most popular stainless steel on the market, with min 16% chrome contained, offers excellent resistance to corrosion making it usable in an extremely wide range of applications.

SS 400 Series	
Cr % min	
SS 409	10.50% min
SS 410	11.50% min
SS 416/ SS420	12.00% min
SS 430	16.00% min
SS 440	16.00% min

DUPLEX STEEL 2205 GRADE SCRAP –SOLID/TURNINGS

Duplex 2205 stainless steel (both ferritic and austenitic) is used extensively in applications that require good corrosion resistance and strength. It exhibits excellent corrosion resistance, much higher than that of grade 316 due to its high chromium, molybdenum, and nitrogen content.

Metco Inox is regularly dealing in Duplex 2205 steel scrap Solids and Turnings on behalf of our customers.

DUPLEX 2205	
Specifications	
Cr	21.00% Min
Ni	4.50% Min
Mo	2.50% Min

DUPLEX STEEL 2507 GRADE SCRAP- SOLID/TURNINGS

Duplex 2507 is a super duplex stainless steel designed for applications which demand exceptional strength and corrosion resistance. Alloy 2507 has 25% chromium, 4% molybdenum, and 7% nickel.

DUPLEX 2507	
Specifications	
Cr	24.00% Min
Ni	6.00% Min
Mo	3.00% Min

This high molybdenum, chromium and nitrogen content results in excellent resistance to chloride pitting and crevice corrosion attack and the duplex structure provides 2507 with exceptional resistance to chloride stress corrosion cracking examples include applications in chemical processing, petrochemical, and seawater equipment.

SS17-4PH SCRAP

17/4 PH (Precipitation Hardening) is the trade name most used for the AISI 630 alloy (UNS S17400 – 1.4542 -X5CrNiCuNb16-4); it belongs to the family of PH steels. The main feature of 17/4 PH is to represent an excellent compromise solution between mechanical resistance and resistance to corrosion.

17-4 Stainless is suitable for a wide variety of applications in the commercial, oil and gas, aerospace, and nuclear industries.

SS 17-4	
Specifications	
Cr	15.00% Min
Ni	3.00% Min
Cu	3.00% Min

SS15-5 PH SCRAP

15-5 PH stainless steel is a martensitic precipitation-hardening stainless steel with approximately 15% Chromium and 5% Nickel. It has high strength, high hardness, and excellent corrosion resistance. Strength can be further increased by a single low temperature heat treatment.

Metco Inox is regularly dealing in 15/5 PH stainless steel scrap and turnings on behalf of our customers.

15-5 PH stainless steel is typically used in the following applications:

- Aerospace structural components
- Valves
- Gears and Shafts
- Oil and Gas components
- Nuclear reactor components

SS 15-5	
Specifications	
Cr	14.00% min
Ni	3.50% min
Cu	2.50% min

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ZURIK SCRAP

SHREDDED Nonferrous SENSOR SORTED Scrap (predominantly stainless steel)

It is combination of the non-ferrous metals: stainless steel, insulated copper wire, ALUMINIUM, copper, lead, magnesium, nickel, tin, and zinc, in elemental or alloyed (solid) form. The percentage of each metal within the nonferrous concentrate shall be subject to agreement between buyer and seller. Material generated by computer sensing equipment (e.g., induction sensor sorting or X-ray) technique(s). Shall have passed one or more magnets to reduce or eliminate free iron and/or large iron attachments. Shall be free of radioactive material, dross, or ash. Material to be bought/sold under this guideline shall be identified as “Zurik” with a number to follow indicating the estimated percentage nonferrous content of the material (e.g.,“Zurik 90” means the material contains approxi-mately 90% nonferrous metal content). May also be screened to permit description by specific size ranges.

- **HIGH NICKEL & ALLOY STEEL SCRAP**

INCONEL

Inconel 625

The market of super alloys always offers excellent opportunities for the high quality of the raw materials used for the realisation thereof, as is the case of Inconel 625.

INCONEL 625 is a nickel alloy resistant to high temperatures and corrosion, characterised by high resistance to wear, tensile strength as well as high resistance to mechanical stress due to oxidation, thus proving to be perfectly suitable for surroundings such as sea-water.

Inconel 625	
Specifications	
Cr	20.00% - 23.00%
Mo	8.00% - 10.00%
Ni	58.00% min

Inconel 718

Inconel 718 is one of the most sought after alloys on the scrap market. INCONEL 718 is a nickel-chrome-molybdenum alloy featuring excellent resistance to corrosion and good resistance to creep crack at high temperatures; it is generally used for engines and turbines, even in the aircraft and petrochemical sector.

Inconel 718	
Specifications	
Cr	17.00% - 21.00%
Mo	2.80% - 3.30%
Ni	50.00% - 55.00%

Inco 825

Inco 825 is an alloy commonly used in the chemical, oil and nuclear industry (for use in the management of nuclear waste) as well as in marine environments thanks to its excellent resistance to corrosion and pitting.

Inco 825	
Specifications	
Cr	19.50%-23.50%
Mo	2.50% - 3.50%
Ni	38.00% - 46.00%

MONEL SCRAP

Monel is a metal alloy, composed of nickel and copper; it is intended to identify a series of nickel alloys.

Monel exhibits good resistance to mechanical stress and corrosion as well as good weldability. It is used on marine facilities and chemical installations.

Monel 400	
Specifications	
Cu	28.00%-34.00%
Mn	2.00% max
Si	0.50% max
Ni	Balance

HASTELLOY

Hastelloy alloys are nickel-molybdenum-chrome alloys, also having a cobalt content, very versatile because combining excellent resistance to corrosion with a good thermal stability, which make them particularly suitable for use within chemical installations.

Hastelloy C 276	
Specifications	
Cr	14.50%-16.50%
Mo	15.00%-17.00%
Ni	51.00%-63.50%
Fe	4.00%-7.00%

WASPALOY

Waspaloy is a registered trademark identifying a nickel-based super alloy featuring good resistance to heat and corrosion and it is mainly used in applications requiring a good performance level at high temperatures, such as for instance gas turbines.

SMO-254

This alloy has a high nickel content and other compositions include molybdenum, copper and nitrogen. The alloy was developed, along with a series of others, to resist stress corrosion cracking in boiling chloride solutions. It is relatively easy to fabricate and weld. It is known to possess excellent workability as well.

SMO-254	
Specifications	
Ni	18.00%
Cr	20.00%
Mo	6.10%
N	0.20%

LOW ALLOY SCRAP

Low alloy steel scrap containing low chromium, low nickel and low molybdenum. It has high toughness and strength in the heat treated condition.

Low Alloy Steel Scrap	
Specifications	
Fe	95.195%-96.33%
Cr	0.700% - 0.900%
Mo	0.200% - 0.300%
Ni	1.65%-2.00%

TOOL STEEL SCRAP

H-11

Tool Steel H11 is a chromium-based steel alloy from the “H” family .H11 is one of the most commonly used alloys from this group, thanks to the outstanding impact toughness.

H11	
Specifications	
N	0.20%
Cr	4.75-5.50
Mo	1.10-1.60
Fe	Balance

H-13

Other steels from H group, such as the H13 have more vanadium, which gives better wear resistance and temper resistance, but worse impact toughness.

H13	
Specifications	
V	0.80%-1.20%
Cr	4.75%-5.50%
Mo	1.10%-1.75%
Si	0.80%-1.20%

P-91

P91 is the mix of chrome , molybdenum plus vanadium. The chrome increases temperature strength and oxidation resistance. The molybdenum increases the elasticity, resistance to wear, and high temperature creep strength.

P91	
Specifications	
V	0.18% - 0.25%
Cr	8.00% - 9.50%
Mo	0.85% - 1.05%

P-92

P92	
Specifications	
V	0.15%-0.25%
Cr	8.00% - 9.50%
Mo	0.30%-0.60%

MANGANESE STEEL SCRAP:-

Manganese Steel Scrap,has features like durability and sturdiness,as it is manufactured from top quality manganese steel. The steel scraps are checked properly on industry defined parameters and sent to the factory for reuse. This type of steel is rust resistance with high strength and can be re-used again.

Manganese Steel scrap	
Specifications	
Mn	11.00%-12.00%
C	1.00% - 1.40%

- FERROUS SCRAPS :-
  - SHREDDED SCRAP-210/211
  - CAST IRON SCRAP
  - HMS SCRAP
  - MS TURNING SCRAP
  - RE ROLLABLE SCRAP
  - CRCA BUNDLES/BUSHELLING BUNDLES
  - TYRE WIRE SCRAP

SHREDDED SCRAP-210/211:

Homogeneous iron and steel scrap magnetically separated, originating from automobiles, unprepared No. 1 and No. 2 steel, miscellaneous baling and sheet scrap. Average density 70 pounds per cubic foot.

CAST IRON SCRAP:

CAST IRON SCRAP (TURNINGS & BORINGS)

Cast iron scrap is a variety of metal scrap that is high in carbon. Several products and structures around us use carbon steel such as columns, pipes, plates, and/ or castings of miscellaneous nature. Must not be over 24 x 30 inches in dimension and no piece to weigh over 150 pounds.Cast iron is a comparatively brittle when compared to mild steel products.

ROTORS AND DRUMS

CAST IRON SCRAP (ROTORS & DRUMS)

This type of scrap is found in vechiles which has disc brakes installed in them.Once a vechile be it a train, car or even bikes all of them have brakes in them and this is made from cast iron. Once the vechile is sent for scrap these parts are removed separately and if in good use are sent for refurbshing to the plant and if has w ear and tear then its is sent for remelting.

HMS –HEAVY MELTING SCRAP

Heavy melting scrap is a designation for recyclable steel and wrought iron. It is broken up into two major categories:

1.HMS 1

2.HMS 2,

HMS 1 does not contain galvanised and blackened steel, whereas HMS 2 does.

This kind of scrap generally consists mix of mill scrap (stampings, cuttings, bars, etc.), Industrial scrap (nuts, bolts, misc. pieces, etc), auto and truck frames and bodies, railroad scrap (wheels, axles, parts of locomotives and carriages, etc.), ship scrap (fittings, plate pieces, parts), construction scrap (plate, bars, angle pieces, rods, steel pipe, etc.) and miscellaneous commercial scrap (appliance casings, frames and parts, etc.).

The scrap will also be totally free from any types of bombs, arms and ammunition, mines, shell, cartridges, sealed containers, gas cylinders, explosive shells or explosive materials in any form either used or otherwise.

HMS(80:20)

This should consist of HMS I/II in the ratio of 80% (HMS I) and 20%(HMS II.)

MS TURNING SCRAP

Clean steel or wrought iron turnings, free of iron borings, nonferrous metals in a free state, scale, or excessive oil.(ISRI Codes:219-220)

RE ROLLABLE SCRAP:-

Re rollable scrap used by rolling mills as a cost effective substitute to ingots or It can be bars, billets end cuttings, mis-rolls, rods, beams and plates.



TYRE WIRE SCRAP:-

Steel tire wire scarp or Tire derived steel (TDS) is a light melting scrap obtained during the shredding process of waste tires.

This material is a high quality steel with high carbon content. It is incorporated in the tires structure to withstand bumps, heat and other hazardous conditions. Consequently reclaimed tire wire is of a very high quality and conforms to well know standards.

CRCA BUNDLES/ BUSHELLING BUNDLES:-

CRC Bundle Scrap is used in the process of making various electrical, automobile and engineering products. It is made from superior quality raw materials that are rust free and non-corrosive in nature. Also, it features durable quality, high density of steel present and excellent hardness