

1.0 SCOPE

This specification provides the list of approved suppliers for various wrought steel specifications, and the list of approved suppliers for various product forms. Specification 1E1861 is applicable to all 1E wrought steel specifications as part of 1E0024 Wrought Steel, and will not appear on drawings.

2.0 APPLICATION

2.1 Steel mill approval process is shown in Figure 1. Figure 3* is a list of melting mills that meet the requirements of 1E0024, mills (melting and non-melting) that meet the requirements of Caterpillar Inc.'s 1E specifications for rollover protective structures (ROPS) materials, and crankshaft materials. Figure 4 is a list of suppliers for steel tubular products. Approved flat steel processors are listed in Figure 5 and Figure 6 is a list of service centers that are approved suppliers of steel for Caterpillar parts, when a service center is used. If the service center listed is a multiple plant company, the approved status is applicable to all facilities. The dispositioning facilities that are responsible for that approval of all incoming materials are listed in Figure 7.

Note*: Mills worldwide that are not rated against caster class in 1E2700 from 1 through 4 may be considered to meet the quality requirements of 1E2700, Class 5.

2.1.1 How To Use This Specification - When applying material to Caterpillar parts, most material specifications require steel to be produced by an approved mill. The first step is to determine the steel designation from the 1E material specification (carbon, alloy, etc.). The designation should be listed at the bottom of each page. For example, 1E0921 is a modification of National Standard 41B17, and is classified as a "Boron" steel. The steel mill Test Certificate should carry the information needed to determine if the mill is approved. 1E1861, Figure 3, is arranged in alphabetical order by geographic location. Within the geographical location, mills are listed by alphabetical order. Find the location, find the mill, then make sure the mill is approved for your steel designation by referring to the "Steel Grades" column. For example, Algoma Steel Corp. is listed as approved for carbon, alloy, and boron steels, so 1E0921 from this mill would be acceptable as long as the metallurgical requirements are met. Please read Articles 3.0 through 10.0 for further information on steel approvals. When you are satisfied that the mill is approved for the material specification in question, then you need to make sure that the metallurgical callouts in the specification are met, as well as any additional requirements found in the Qualifying Specifications listed at the beginning of the material specification.

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2.1.2 When National Standard grade materials are ordered to fulfill a 1E spec requirement, all qualifying Caterpillar 1E specs must be met. This can be done by careful review of the steel documentation required to assure that all Caterpillar material requirements are met. If there are any questions about the steel being fit-for-use, it is best to contact your dispositioning facility (Figure 7) for guidance.

3.0 APPROVED STEEL SUPPLIERS INFORMATION

3.1 Approved steel suppliers are melting mills deemed capable of producing steel to Caterpillar 1E material specifications. All material ordered to Caterpillar 1E material specifications from approved mills (melting or non-melting) shall be produced in accordance with Caterpillar requirements for processing, testing, data submission, and approval. There are two levels of approval, "Limited Approved (L)" and "Approved (A)". The various Caterpillar dispositioning facilities worldwide are responsible for determining the appropriate level of approval. The Approved Steel Suppliers List, Figure 3, lists the steel types that each melting mill may supply:

3.1.1 Carbon - The mill can provide plain carbon steel grades. Carbon grades include modified SAE 10xx, 11xx, 12xx and 15xx grades. For plate and sheet grades, this includes 1E0357, 1E0065, 1E1883, 1E0166, and 1E0170.

3.1.2 Alloy - The mill can provide alloy grade steels.

3.1.3 Boron - The mill can provide boron grade steels that have an ideal diameter (DI) and/or Jominy callout per the material specification. Boron containing steels without DI and/or Jominy Hardenability callout are not considered "Boron" grades in Caterpillar terminology and are not expected to conform to Paragraph 9.5 of 1E0024 or report any Jominy data.

3.1.4 Microalloy Bar - The mill can provide control cooled microalloy bar for grades with as-rolled mechanical property requirements.

3.1.5 Special Cleanliness - The mill can provide special cleanliness grade steel that meets the requirements of 1E2661.

3.1.6 Special Alloy - The mill can provide Caterpillar proprietary steels intended for special applications that require specific steel making process and quality control.

3.1.7 Leded steels are not permitted unless approved by Caterpillar dispositioning facilities.

Note: Other steel types may appear in the Approved Steel Suppliers Table for specialized cases.

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3.2 Limited Approved

3.2.1 Suppliers with this status have passed a preliminary evaluation with regard to their capabilities, which has led to shop trials of production material. Unrestricted use of steel from such melting mills is allowed only for direct purchases by Caterpillar. Steel from these melting mills for suppliers of purchased finished parts must be approved on a heat-by-heat basis by the dispositioning facility prior to use. Prior to placing any melting mill on "approved" status, satisfactory performance of material in production must be achieved over a sustained period.

3.2.2 Unless otherwise exempted, Limited Approved Steel Mills shall report steel mill test data to the dispositioning facility for 1E material specifications used for Caterpillar components, regardless of manufacturing location. These suppliers will comply with reasonable requests from the Caterpillar Development Engineer, including providing steel samples, to further their development towards full Approved Status.

3.3 Approved

3.3.1 Suppliers with this status have achieved satisfactory performance with their materials in production over a sustained period. Use of steel from such melting mills is restricted only by the steel types (e.g., carbon, alloy, boron, etc.) listed in the Approved Steel Suppliers List. Caster classification, reduction ratio, and other requirements of the individual Caterpillar 1E material specifications still apply. Suppliers producing material used for Caterpillar components shall test and report data in accordance with Qualifying Specification 1E0024.

3.3.2 Unless otherwise exempted, approved steel mills shall report steel mill test data to the dispositioning facility for 1E material specifications used for Caterpillar components, regardless of manufacturing location. These suppliers will comply with reasonable requests from the Caterpillar Development Engineer or Dispositioning Engineer, including providing steel samples for routine audits.

3.4 Unapproved Suppliers

3.4.1 There may be steel suppliers who are capable of producing steel to Caterpillar 1E material specifications, but who have not been evaluated by Caterpillar. Suppliers of purchased finished parts wishing to use melting mills not listed must contact their dispositioning metallurgical facility to request a mill waiver granting authorization to use that source. These waivers will be on a heat-by-heat basis, and approval will depend on the end use application and on Caterpillar's experience and familiarity with the mill's capabilities. Such a waiver will be granted only if the requesting supplier accepts full responsibility for performance and reporting of all specified test data to the dispositioning facility.

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3.4.2 In order to begin the approval process, a business case must be submitted by the supplier or Caterpillar contacts to Global Purchasing Segment - Steel. The business case will be reviewed to determine if the need is justified to develop the mill. The request shall be directed to:

Sam Banerji, 309-578-1798 (Global Purchasing, U.S.) or
Phil Krumholz, 309-675-2003 (Design Control A518, U.S.)

3.4.3 Once the business case is approved, development may begin, and a 3-digit mill quality code is assigned per Manufacturing Practice MQ1000-501. Minimum information required is the name, city, state and country, as applicable, for a new mill entry. On receipt, Design Control A518 will assign the quality code and the Global Purchasing Steel Development Engineer shall pass this information along to the supplier along with other relevant development materials.

3.4.4 Steel Supplier Development Engineers shall contact Design Control A518 with supplier name changes for revisions to 1E1861 and MQ1000-501.

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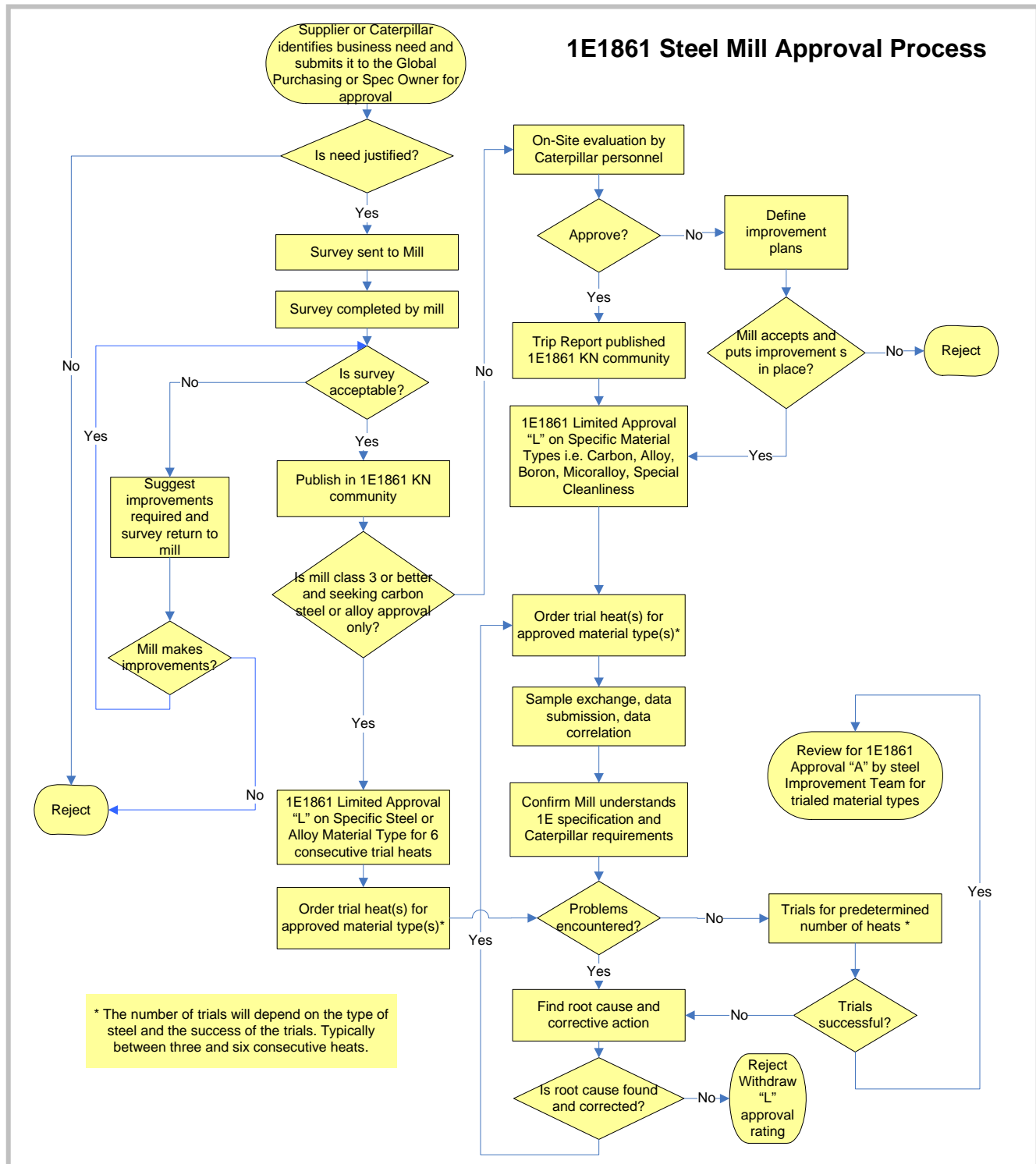


Figure 1

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4.0 APPROVED STEEL SUPPLIERS FOR ROLLOVER, TIP-OVER AND FALLING OBJECT PROTECTIVE STRUCTURES (ROPS, TOPS AND FOPS)

Approved ROPS suppliers of flat-rolled steel or tubing, which also are approved TOPS and FOPS suppliers, are indicated by a (Y) in the ROPS column of the Approved Steel Suppliers List, Figure 3. **This specification is in no way intended to supercede the material property verification and documentation requirements that are contained in the individual ROPS material specifications.** Approved ROPS mills are still required to submit product samples (unless otherwise specified in written waiver) and heat data (chemistry, tensile, and Charpy impact results) to the dispositioning facility for all product going into a Caterpillar ROPS structure. If ROPS material must be purchased from a non-ROPS approved mill, each heat and size of material must be approved by the dispositioning facility prior to use of the material. The dispositioning facility is required to perform chemistry, tensile, and impact tests to verify specification compliance prior to approving the material for use in a ROPS structure.

5.0 APPROVED STEEL SUPPLIERS FOR CRANKSHAFTS

5.1 Steel mills approved to produce steel for crankshafts are indicated by the presence of an approved code in the crankshaft column of Figure 3. One or more codes may appear in the column depending on the type of materials a mill is approved to provide. The material codes are:

- C Carbon Steel (Examples - 1E0271, 1E0713)
- A Alloy Steel (Examples - 1E1473B, 1E2824)
- M Microalloy (Examples - 1E1586)

5.2 If a "Y" appears in the approval column, then the mill has been approved to produce crankshaft steel in the past; however, some limited validation would be required for the mill to be approved to produce a specific grade of steel. In all cases of crankshaft steel application requirements, the minimum reduction ratio from cast product size to mult size must be met in addition to steel making approval.

6.0 APPROVED STEEL SUPPLIERS FOR TUBULAR PRODUCTS

The list of approved steel suppliers for tubular product, Figure 4, shows the manufactured types that each mill may supply. The materials for tubular product shall be supplied by Caterpillar approved mills listed in Figure 3.

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7.0 APPROVED FLAT STEEL PROCESSORS

The list of approved processors for flat steel cut to length for sheet and plate, Figure 5, shows the process type used by each supplier. The materials for flat steel processors shall be supplied by Caterpillar approved mills listed in Figure 3.

8.0 APPROVED STEEL SERVICE CENTERS

Approved Steel Service Centers are those suppliers who have demonstrated knowledge of Caterpillar 1E steel specifications and approved substitute materials. These suppliers are committed to a continuing effort to purchase materials from Caterpillar approved melting mills, and provide materials that meet or exceed Caterpillar engineering requirements. Unless otherwise exempted, Approved Steel Service Centers that qualify National Standard steel grades to Caterpillar 1E specifications shall report steel data to the dispositioning facility for 1E material specifications used for Caterpillar components, regardless of manufacturing location. The Approved Steel Service Centers List, Figure 6, shows the product forms each service center may supply. At the time of release of 1E1861, Change 18, the Approved Steel Service Center List has been completed for U.S. sources only.

9.0 CATERPILLAR DISPOSITIONING FACILITIES

Figure 7 lists the Caterpillar Inc. dispositioning facilities worldwide, which monitors steel quality, maintain the corporate mill heat database, disposition steel heats, and serve as the metallurgical approval "hot line" for mills, warehouses, and parts suppliers.

10.0 APPROVAL PROCESS

To become an approved supplier of any Caterpillar wrought product, contact the appropriate dispositioning facility (see Figure 7), and refer to Figure 1.

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11.0 SUBSIDIARY SPECIFICATIONS (FOR CATERPILLAR REFERENCE ONLY)

11.1 At the time of release of 1E1861, Change 18, the following subsidiary versions of 1E1861 were in use by Caterpillar Facilities outside of the United States.

Caterpillar Materiels Routiers S.A. (Rantigny)	"H" Version
Caterpillar Brazil Ltda. (Piracicaba)	"G" Version
Caterpillar Belgium S.A. (Gosselies)	"H" Version
Caterpillar France S.A. (Grenoble)	"H" Version
Caterpillar Japan Ltd. (Akashi)	"X" Version
Caterpillar Japan Ltd. (Sagami)	"X" Version

Figure 2

11.2 Subsidiary versions may be changed, released, or canceled without a change to this version of 1E1861. The Engineering Data System (EDS) provides information on the status of subsidiary version specifications and should be referenced for current information.

12.0 REFERENCES

Caterpillar Specifications	1E0024, 1E0065, 1E0166, 1E0170, 1E0271, 1E0357, 1E0509, 1E0713, 1E0921, 1E1473B, 1E1586, 1E1883, 1E2661, 1E2661A, 1E2661B, 1E2700, 1E2824
National Standard	41B17

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Approved Steel Suppliers										
Supplier	App Stat	ROPS	Crnk Shft	Cast Prod	Vac Deg	Cast Cls	As-Cast Size	Steel Grades	Code	Disp Fac
Africa										
ArcelorMittal South Africa (Formerly Mittal South Africa) (Vanderbijl, S. Africa)	A			Slab	Y	1A	210 mm Min	Carbon, Boron, Alloy	196	SAFR
Asia										
Aichi Steel Works (Nagoya, Japan)	A			Bloom	Y	1A	370 x 480 mm	Carbon, Boron, Alloy	176	SAGA
Asil Celik (Bursa, Turkey)	A			Ingot	Y			Carbon, Boron, Alloy	199	T&SD AMT
BaoShan Iron & Steel Co., Ltd, Steelmaking Plant BOF Branch Works (Shanghai, P.R.C.)	A	Y		Slab	Y	1B	250 (230, 210) x 900-1920 mm	Carbon, Alloy, Boron	168	CMT
BaoShan Iron & Steel Co., Ltd, Steelmaking plant EAF Branch Works (Shanghai, P.R.C.)	A		Y	Round Billet	Y	1A	178 & 153mm RD	Carbon, Alloy, Boron Microalloy Bar, Special Cleanliness (1E2661A)	227	CMT
BaoShan Iron & Steel Co., Ltd., Special Steel Branch, West Plant (Shanghai, P.R.C.) (Formerly Baosteel Special Steel Co., Ltd.)	A			Billet Bloom	Y	1A	140 mm SQ 180 mm SQ 220 mm SQ	Carbon, Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661A)	228	CMT
Bhilai Steel Plant (SAIL) (Bhilai, India)	L			Slab	Y	1B	200-250x1100-1800mm	Carbon	282	IMT
Bokaro Steel Plant –SAIL (Bokaro, India)	L			Slab	N	1B	200,225,250 X 940-1850 mm	Carbon, Alloy	267	IMT
China Steel Corp. (Kaohsiung, Taiwan, R.O.C.)	L			Bloom	Y	1A	220 x 240 mm	Carbon, Boron, Alloy	238	T&SD AMT
Daido Steel (Japan)	A			Ingot	Y			Boron, Alloy, Special Cleanliness (1E2661A)	142	SAGA
Daye Special Steel Co. Ltd / Hubei Xin Yegang Co. Ltd, No.4 Steel Making Plant (Huang Shi, Hubei, P.R.C.)	A			Ingot	Y			Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	219	CMT
	A			Billet/ Bloom	Y	1A	190 Round, 180mm SQ, 210 X240mm, 240 mm SQ, 350 X 470mm	Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	219	CMT
Dongbei Special Steel Group Co. Ltd, Fushun Plant. (Fushun, Liaoning, P.R.C.) (Formerly Liaoning Special Steel Group)	L			Ingot/ Billet/ Bloom	Y	1A	200 mm SQ 240 mm SQ 320 X280 mm	Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	220	CMT
Dongkuk (Pohang, South Korea)	L							Roll Slabs Sourced From Approved Mills	285	
ESSAR Steel Limited (Hazira, India)	A	Y		Slab	Y	1B	220 X 800-2000 mm	Carbon, Alloy	241	IMT

Figure 3 (Continued On Next Page)

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Godo Steel Ltd. (Himeji, Japan)	A			Bloom	Y	1A	220 x 250 mm 250 x 300 mm	Carbon, Boron, Alloy	216	SAGA
Hyundai Steel (Incheon, South Korea)	L			Ingot	Y			Carbon, Alloy	286	SAGA
ISMT (Formerly Indian Seamless Steels and Alloys Ltd.) (Jejuri, India)	A			Billet	Y	1A	160,200, 225 RD	Carbon, Alloy, Boron, Special Cleanliness (1E2661A)	268	IMT
JFE Steel Corp. - Keihin (formerly Nippon Kokan Steel) (Keihin, Japan)	A	Y		Bloom	Y	1A	400 x 520 mm	Carbon, Boron, Alloy	147	SAGA
	A			Slab	Y	1A	250 mm	Carbon, Boron, Alloy	147	SAGA
JFE Bars & Shapes Co. (Formerly NKK Bars & Shapes Co.) (Sendai, Japan)	A			Bloom	Y	1A	310 x 400 mm	Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	174	SAGA
JFE Steel Corp. - Mizushima (Formerly Kawasaki Steel) (Mizushima, Japan)	A	Y		Bloom	Y	1A	300 x 400 mm	Carbon	144	SAGA
	A	Y		Slab	Y	1B	200 – 260 mm	Boron, Alloy	144	SAGA
Jiangyin Xingcheng Special Steel Works Co. Ltd. Binjiang Phase I Production Line (Jiangyin, Jiangsu, P.R.C.) (Heat # begins with "H")	A			Billet/ Bloom	Y	1A	300x320 mm	Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	226	CMT
Jiangyin Xingcheng Special Steel Works Co. Ltd. Binjiang Phase II production line (Jiangyin, Jiangsu, P.R.C.) (Heat # begins with "E")	L			Billet/ Bloom	Y	1A	200mm SQ, 370x490mm; 220/(250)/280 /350/390/450/ 500/600 mm RD (possibly extend to 800mm RD)	Carbon, Alloy, Boron	279	CMT
Jiangyin Xingcheng Special Steel Works Co. Ltd. Huashan Plant (Jiangyin, P.R.C.) (Heat # begins with "R")	L			Billet/ Bloom	Y	1A	180 mm SQ	Carbon, Boron, Alloy,	261	CMT
Jindal Iron & Steel Co. Ltd. (Rolling Mill – Vasind, India & Steel Mill – Vijayanagar, India)	A			Slab	N	1B	220 X 800- 1300 mm	Carbon, Alloy	245	IMT
Jindal Steel Works (Salem, India)	L			Bloom/ Billet	Y	3	100 mm SQ 130 mm SQ 160 mm SQ 160-340 x400mm	Carbon, Alloy	245	IMT
Jinan Iron & Steel Co., LTD, No. 3 Steelmaking Plant (Jinan, Shandong, P.R.C)	A			Slab	Y	1B	200, 270 x 1600~2100 mm	Carbon, Alloy	272	CMT

Figure 3 (Continued On Next Page)

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Kalyani Carpenter Special Steel Ltd. (Pune, India)	A		Y (M)	Billet/Bloom	Y	1A	160X160 mm 210X230 mm 240X280 mm 265X365 mm 320X400 mm	Carbon, Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661A)	243	IMT
	A			Ingot	Y		370X285 mm 630X490 mm 790X660 mm 994 mm RD	Carbon, Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661A)	243	IMT
Kangwon Industries, Ltd. (Pohang, S. Korea)	A			Billet/Bloom	Y	1A	120 mm SQ 130 mm SQ 200 mm SQ 270 x 320 mm 320 x 430 mm	Carbon, Boron, Alloy	180	SAGA
Kobe Steel (Kobe, Japan)	A			Bloom	Y	1A	300 x 430 mm	Carbon, Boron, Alloy, Microalloy Bar	145	SAGA
	A			Billet	Y	1A	150 mm SQ	Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	145	SAGA
Kobe Steel (Kakogawa, Japan)	A	Y		Bloom	Y	1A	380 x 600 mm	Boron, Alloy	178	SAGA
Mahindra Ugine Steel Co. Ltd. (MUSCO) (Khopoli, India)	L			Ingot	Y		2, 3 and 6 ton	Carbon, Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661A)	242	IMT
Mahindra Ugine Steel Co. Ltd. (MUSCO) (Khopoli, India)	L			Billet/Bloom	Y	1A	145X160 mm 180X200 mm 200X250 mm	Carbon, Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661A)	242	IMT
Mitsubishi Steel (Muroran, Japan)	A	Y	M	Bloom	Y	1A	515 X 370mm	Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	146	SAGA
Mukand Limited (Hospet, India) (Formerly Kalyani Mukand Hospet Steel Ltd.)	A			Billet/Bloom	Y	1A	160,200,220 RD; 240X280	Carbon, Boron, Alloy, Special Cleanliness (1E2661A)	244	IMT
Nanjing Iron & Steel United Co., Ltd, Plate/coil production line (Nanjing, Jiangsu, P.R.C)	A			Slab	Y	1B	150 x 1600~3250m, 180/220/260 x 1600~2300mm	Carbon, Alloy	280	CMT
Nippon Steel (Kimitsu, Japan)	A	Y		Slab	Y	1A	210 - 300 mm	Carbon, Boron, Alloy	190	SAGA
Nippon Steel (Muroran, Japan)	A		C	Bloom	Y	1A	350 x 560 mm	Carbon, Boron, Alloy, Microalloy Bar	148	SAGA
Nippon Steel (Nagoya, Japan)	A			Slab	Y	1A	245 mm 320 mm	Carbon, Boron, Alloy	217	SAGA
Nisshin Steel (Kure, Japan)	A			Slab	Y	1A	200 x 1220 mm	Carbon, Alloy	234	SAGA

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Panzhuhua Iron & Steel Group Co., LTD (Panzhuhua, Sichuan, P.R.C)	L			Billet/ Bloom	Y	1A	280 x 325 mm 280 X 380 mm	Carbon, Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661A)	252	CMT
POSCO (Pohang, Korea)	L			Slab	Y	1A	200, 220 250 mm	Carbon, Boron, Alloy	173	SAGA
	L			Billet	Y	1A	120 mm SQ 160 mm SQ	Carbon, Boron, Alloy	173	SAGA
	L			Bloom	Y	1A	300 x 400 mm	Carbon, Alloy, Boron, Special Cleanliness (1E2661A)	173	SAGA
POSCO Specialty Steel Company (Chang Won City, South Korea)	L			Ingot	Y			Carbon, Alloy	284	SAGA
Rinko Steel (Japan)	A			Billet	N	4	100 mm SQ 115 mm SQ 135 mm SQ 165 mm SQ 210 mm SQ	Carbon	209	SAGA
Rourkela Steel Plant (SAIL) (Rourkela, India)	L			Slab	Y	1B	180-120 x 600-1300mm	Carbon, Alloy	271	IMT
Sanyo Steel (Himeji, Japan)	A			Bloom	Y	1A	380 x 490 mm	Carbon, Alloy	177	SAGA
SeAH Besteel Corp. (Formerly Kia Steel Co., Ltd.) (Kunsan, S. Korea)	A			Bloom	Y	1A	370 x 480 mm	Carbon, Boron, Alloy	104	CMT
Shijiazhuang Iron & Steel Co. Ltd (Shijiazhuang, Hebei, P.R.C.)	A			Billet	Y	1A	150 mm SQ 180 mm SQ 220x300 mm 280x320 mm 300x360 mm	Carbon, Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661A)	273	CMT
Sumitomo Metal (Kashima, Japan)	A	Y		Slab	Y	1A	190 - 300 mm	Carbon, Boron, Alloy	169	SAGA
Sumitomo Metal (Kokura, Japan)	A			Ingot	Y			Carbon, Boron, Alloy	151	SAGA
Sumitomo Metal (Wakayama, Japan)	A		C, M	Ingot	Y			Carbon, Boron, Alloy, Microalloy Bar	152	SAGA
Suzhou Suxin Special Steel Co. Ltd (Suzhou, Jiangsu, P.R.C)	L			Billet/ Bloom	Y	3	195x195 240x240 260x340	Carbon, Alloy, Boron	287	CMT
Topy Industries (Toyohashi, Japan)	A			Bloom	Y	1B	200 x 300 mm 280 x 550 mm	Carbon, Boron, Alloy	161	SAGA
Tata Iron & Steel Co. (TISCO) (Jamshedpur, India)	A	Y		Slab	Y	1B	210 X900-1550 mm	Carbon, Alloy	240	IMT
Usha Martin Limited- Usha Alloys and Steels Division, (Jamshedpur, India)	L			Billet	Y	3	130 X 130 mm 150 x 150 mm	Carbon, Alloy, Boron,	264	IMT

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Vardhman Special Steels, (Ludhiana, India)	A			Billet	Y	1A	200 X 200 mm 160X160 mm 125X125 mm	Carbon, Alloy, Boron, Special Cleanliness (1E2661A)	269	IMT
Vizag Steel Plant (VSP) (Visakhapatnam, India)	L			Bloom	N	3	320 X 250 mm 250 X 250 mm	Carbon	270	IMT
Wuhan Iron & Steel (Group) Co., (Wuhan, Hubei, P.R.C.)	A	Y		Slab	Y	1B	250 (230, 210) mm x 900 – 1600 mm	Carbon, Boron, Alloy	237	CMT
Wuyang Iron and Steel Co. Ltd. Hansteel Group Corporation (Wuyang, Henan, P.R.C.)	A	Y		Slab	Y	1B	250(210, 300) mm X1200- 1900 mm	Carbon, Alloy, Boron	192	CMT
	A	Y		Ingot	Y		Width x Thickns 1340x530 mm ~ 2090x780 mm	Carbon, Alloy, Boron	192	CMT
Wuyang Iron and Steel Co. Ltd.-New production line. Hansteel Group Corporation (Wugang, Henan, P.R.C.)	A			Slab	Y	1B	200/(250)/300 mm x 1300- 2500mm	Carbon, Alloy, Boron	281	CMT
Australia										
Bluescope Steel Ltd. (Formerly BHP) (Wollongong, NSW, Australia)	A	Y		Slab	Y	1A	230 mm 300 mm	Carbon, Boron, Low Alloy Microalloy Plate	159	MELB
Bisalloy Steel Pty Ltd. (Wollongong, NSW, Australia)	A							Q+T Plates if Slabs Sourced from Bluescope	232	MELB
Europe										
ABS - Acciaierie Bertoli Safau (Udine, Italy)	A			Ingot	Y			Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	167	GREN
	A			Bloom	Y	1A	200 mm RD 325 mm RD 400 mm RD 160 mm SQ	Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	167	GREN
ABS - Acciaierie Bertoli Safau -Luna Caster (Udine, Italy)	L			Billet	Y	1A	160 X 200 mm	Carbon, Alloy, Boron	167	GREN
Acciaierie di Civate al Piano SpA (Civate al Piano, Italy)	L			Billet	Y	3A	120 mm SQ 120 mm RD	Carbon	239	GREN
	L			Ingot	Y			Carbon, Alloy		
Acroni (Panorama, Slovenia)	A			Slab	Y	1B	200-250x 890-1560mm	Carbon	235	GOSS
ArcelorMittal Ruhrort (Duisburg, Germany) (Formerly Mittal Steel Ruhrort)	A		C, M	Bloom	Y	1A	330 x 260 mm 380 x 265 mm	Boron, Alloy, Special Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	187	GOSS

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ASCOMETAL - Groupe Lucchini (Usine des Dunes, France)	A			Ingot	Y			Carbon, Boron, Alloy, Microalloy Bar Special Cleanliness (1E2661A)	126	GREN
	A			Bloom	Y	1B	254 mm RD 270 mm RD 290 mm RD 325 mm RD	Carbon, Boron, Alloy, Microalloy Bar Special Cleanliness (1E2661A)	126	GREN
ASCOMETAL - Groupe Lucchini (Usine d'Hagondange, France)	A			Bloom	Y	1A	240 X 320 mm	Carbon, Boron, Alloy, Microalloy Bar Special Cleanliness (1E2661A)	130	GREN
ASCOMETAL - Groupe Lucchini (Usine de Fos-sur-Mer, France)	A		A	Ingot	Y			Carbon, Boron, Alloy, Microalloy Bar Special Cleanliness (1E2661A)	143	GREN
BGH (Boschgotthardshütte) Edelstahl GmbH (Siegen, Germany)	L		L	Ingot	Y			Alloy Special Cleanliness (1E2661A)	121	T&SD AMT
Carsid (Ittre, Belgium)	A			Slab	N		220 – 250 mm	Carbon, Alloy	205	GOSS
Corus - Tata Group (Netherlands)	A	Y		Slab	Y	1B	200 mm – 225 mm	Carbon	170	GOSS
Corus - Tata Group (Ijmuiden, Netherlands)	L			Billet	Y	1B	200 mm SQ	Carbon, Boron, Alloy	181	GOSS
Corus - Tata Group (Lackenby, U.K.)	A	Y		Slab	Y	1B	225 mm 250 mm 295 mm	Carbon, Boron, Alloy	132	T&SD AMT
	A	Y		Bloom	Y	1B	254 mm SQ, 330 x 254 mm, 406 x 305 mm, 483 x 305 mm	Carbon, Boron, Alloy	132	T&SD AMT
Corus - Tata Group (Port Talbot, U.K.)	A	Y		Slab	Y	1B	225 mm	Carbon, Alloy, Boron	223	GREN
Corus - Tata Group (Rotherham, U.K.)	A		C, A	Bloom	Y	1A	400 x 560 mm	Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	128	T&SD AMT
Corus - Tata Group (Scunthorpe, U.K.)	A			Bloom	Y	1B	355 mm x 750 mm	Carbon, Boron, Alloy	197	GOSS
	A	Y		Slab	N	1B	230 mm 305 mm	Carbon, Boron, Alloy	197	GOSS
	A			Bloom	Y	1A	330 x 254 mm 305 x 355 mm 483 x 305 mm	Carbon, Boron, Alloy	197	T&SD AMT
Dillinger Huttenwerke GTS, (Dillingen/Saar, Germany) (ArcelorMittal Group)	A			Ingot	Y			Carbon, Boron, Alloy	110	GOSS

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	A			Slab	Y	1B	300-400 mm	Carbon, Boron, Alloy	110	GOSS
Dillinger Hutte GTS Dunkerque (Dunkerque, France) (formerly Sollac) (ArcelorMittal Group)	A	Y		Slab	Y	1A	300 x 2090 mm	Carbon, Boron, Alloy	193	GOSS
Duferco Clabecq, (Clabecq, Belgium)	A	Y			N			Roll slabs sourced from approved mills	198	GOSS
Duferco Makstil (Macedonia)	L			Slab	N	1B	200 and 250 mm	Carbon	277	GOSS
Edelstahlwerke Buderus A.G. (Wetzlar, Germany)	A		A	Ingot	Y			Boron, Alloy, Special Cleanliness (1E2661A)	103	GOSS
EdelstahlWitten, (Krefeld, Germany)	A		A	Ingot	Y			Carbon, Boron, Alloy, Special Alloy, Microalloy Bar Special Cleanliness (1E2661A)	140	GOSS
EdelstahlWitten, (Krefeld, Germany)	A			Bloom	Y	1B	475 X 340 mm	Carbon, Boron, Alloy, Special Alloy, Microalloy Bar Special Cleanliness (1E2661A)	140	GOSS
Ellwood Steel Belgium (ESB), (Seraing, Belgium)	A			Bloom	Y	1A	310 mm RD 400 mm RD 500 mm RD 600 mm RD	Carbon, Boron, Alloy, Special Cleanliness (1E2661A)	214	GOSS
GMH (Germany)	A			Ingot	Y			Carbon, Boron, Alloy, Special Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	137	GOSS
	A			Billet/ Bloom	Y	1A	165 mm SQ 230 mm SQ	Carbon, Boron, Alloy, Special Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	137	GOSS
Huta Czystochowa (Czystochowa, Poland)	A			Slab	Y	1A	225 mm x 1100 mm to 2000 mm	Carbon	101	GOSS
Huta Stalowa Wola (StalowaWola, Poland)	L			Bloom	Y	3A	270 X 320 mm	Carbon, Boron, Alloy	222	T&SD AMT
	L			Slab	Y	3A	130 X 800 mm, 180 X 800 mm	Carbon, Boron, Alloy	222	T&SD AMT
Huttenwerke Krupp Mannesmann GmbH (Duisburg, Germany)	L			Bloom	Y	3	180, 220, 240, 270, 310, 370, 406 RD	Carbon, Alloy	295	T&SD AMT
Ilseburger Grobblech (Salzgitter, Germany)	A			Slab	Y	1B	250 mm	Carbon	275	GOSS
Imatra Steel Oy (Imatra, Finland)	L			Ingot	N			Carbon, Boron, Alloy	204	GOSS

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INDUSTEEL (Charleroi,Belgium) (formerly Fabrique de Fer) (ARCELOR Group)	A			Slab	Y	1B	300 x 2150 mm	Carbon, Alloy,Boron	105	GOSS
Krupp Stahl (Siegen, Germany)	A		Y	Ingots	Y			High Carbon	135	T&SD AMT
	A		Y	Billet	Y	1A	265mm SQ	Low Carbon, Microalloy Bar	135	T&SD AMT
Lech - Stahlwerke GmbH (Meitingen, Bavaria, Germany)	A			Billet	Y	1A	170 mm SQ 200 mm SQ	Boron, Alloy, Special Cleanliness (1E2661A)	186	GOSS
LEALI (Borgo Valsugana – Italy)	L			Billet	N	3	127 mm SQ 145 mm SQ 160 mm SQ	Carbon, Alloy	289	GREN
Lucchini Siderurgia Huta LW (Poland)	A			Bloom	Y	3	140 mm SQ 200 mm SQ	Carbon, Boron, Alloy	259	GREN
Lucchini Siderurgica (Stabilimento di Piombino, Italy)	L			Billet	Y	1A	140 mm SQ 170 mm SQ	Carbon, Boron, Alloy, Microalloy Bar	116	GREN
Lucchini Siderurgica (Stabilimento di Piombino, Italy) (Continued)	L			Bloom	Y	1A	170 mm SQ 200 mm SQ 320 mm SQ	Carbon, Boron, Alloy, Microalloy Bar	116	GREN
OEMK (Oskol, Russia)	L			Bloom	Y	1A	360 x 300mm	Carbon, Boron	254	GREN
Ovako Steel (Hofors, Sweden) (Formerly Fundia)	A			Ingots	Y			Alloy, Special Cleanliness (1E2661A)	171	GOSS
Ovako Steel (Smedjebacken, Sweden) (Formerly Fundia)	A			Billet	N	1B	165 mm SQ	Alloy, Boron	120	GOSS
Rautaruukki (Ruukki) (Oulu, Finland)	L			Slab	Y	1B	175, 210, 270 mm	Carbon, Alloy	231	GOSS
Rautaruukki Oyj Raahen Works (Raahen, Finland)	A			Slab	Y	1B	210x (900- 1900) (175,210,270)x 1800 210x(900- 2000)	Carbon, Alloy	288	GOSS
Riva Acciaio (Stabilimento di Caronno, Italy)	A			Billet	Y	1A	120 mm SQ 140 mm SQ 160 mm SQ 145 mm RD	Carbon, Boron, Alloy, Microalloy Bar	221	GREN
Riva Acciaio (Stabilimento di Lesegno, Italy)	A			Billet	Y	1A	160 mm SQ	Carbon, Boron, Alloy, Microalloy Bar	129	GREN
Saarstahl Voelklingen GmbH (Saar- Brücken, Germany)	A		M	Billet/ Bloom	Y	1A	125 mm SQ 150 mm SQ 240 mm SQ 240 x 320 mm	Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	127	GOSS
Severstal (Cherepovets, Russia)	A			Slab	N	1B	250 x 1020-1850 mm	Carbon	236	GOSS

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Sidenor (Basauri Plant, Bilbao, Spain)	A			Billet	Y	1A	15 5mm SQ 185 mm SQ	Carbon, Boron, Alloy, Special Cleanliness (1E2661A)	118	GREN
Sidenor (Reinosa Plant, Santander, Spain)	A			Ingot	Y			Carbon, Boron, Alloy, Microalloy Bar Special Cleanliness (1E2661A)	195	GREN
Sidenor (Legazpi, Spain)	L			Bloom	Y	1B	240x310 mm	Carbon, Alloy, Special Cleanliness (1E2661A)	283	GREN
SIDMAR, (Gent, Belgium) (ARCELOR Group)	A	Y		Slab	Y	1B	950 mm- 2630 mm, 220 mm	Carbon	248	GOSS
SISMA AFE Beltrame Group (Vicenza, Italy)	A			Billet Bloom	N	1B	140 mm SQ 160 mm SQ 185 mm SQ 195 mm SQ	Carbon, Boron, Alloy	113	GREN
Sollac Fos (Fos-Sur-Mer, France) (ARCELOR Group)	A	Y		Slab	Y	1A	220 mm	Carbon, Boron, Alloy	194	GREN
Stahlwerk Bous GmbH (Germany)	L			Ingot	Y			Carbon, Alloy	290	GOSS
Svenskt Stal Aktiebolag (SSAB) (Oxelösund, Sweden)	A	Y		Slab	Y	1B	220 x 1700 mm 290 x 1700 mm	Boron, Alloy	189	GOSS
Tenaris (formerly DST - SidocaCorp.) (Dalmine Bg, Italy)	A			Bloom	Y	1B	145 - 395 mm RD	Carbon, Alloy, Microalloy	114	T&SD AMT
Trametal (Giogio di Nogaro/Udine, Italy)	L							Roll slabs sourced from approved mills	278	GOSS
Thyssen Krupp Stahl AG (Duisburg, Germany)	A	Y		Slab	Y	1B	218, 220, 254, 260, & 320 mm X 1200-2400 mm	Carbon, Alloy, Boron	229	GOSS
Trinecke Zelezarny Moravia Steel (Trinec, Czech Republic)	A			Bloom	Y	3	250X320 mm 300X350 mm 320, 410, 525 RD	Carbon, Alloy, Boron, Microalloy Bar	230	T&SD AMT
US Steel Kosice (Slovakia)	A			Slab	N	1B	220 mm	Carbon	276	GOSS
Venete SpA, (Padova, Italy)	A			Billet	Y	1A	115 mm SQ 120 mm SQ 140 mm SQ 160 mm SQ	Carbon, Boron, Special Cleanliness (1E2661A)	107	GREN
	L			Bloom	Y	1A	180 mm SQ 200 mm SQ 240 mm SQ 280 mm SQ 300 mm SQ 350 mm SQ	Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661A)	107	GREN
V&M Saint-Saulve Steel Works (Saint-Saulve, France)	L			Bloom	Y	3	140, 180, 220, 223, 240, 250, 270, 310 RD	Carbon, Alloy	294	T&SD AMT

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Vereinigte Schiedwerke Bochum, (Germany)	A		Y	Ingot	Y			High Carbon	119	T&SD AMT
Voest Alpine (Linz, Austria)	A	Y		Slab	Y	1A	T:215, 250, 285 mm/W: 740,1650 mm	Carbon, Alloy	207	GREN
North America										
Altos Hornos de Mexico, S.A. (AHMSA) (Monclova, Coah, Mexico)	A	Y		Slab	N	1B	8"	Carbon, Alloy, Boron	046	CMS
ArcelorMittal Burns Harbor LLC (formerly Mittal Steel USA, Inc - Burns Harbor)	A	Y		Slab	Y	1B	10"	Carbon, Alloy, Boron	007	T&SD AMT
ArcelorMittal Cleveland Inc. (formerly Mittal Steel USA, Inc - Cleveland)	A	Y		Slab	Y	1B	9"	Carbon, alloy	030	T&SD AMT
ArcelorMittal Coatesville LLC (formerly Mittal Steel USA, Inc - Coatesville)	A	Y		Ingot	Y			Carbon, Alloy, Boron	052	T&SD AMT
	A	Y		Slab	Y	1B	9"	Carbon, Alloy, Boron	052	T&SD AMT
ESSAR Steel Algoma Inc. (Formerly Algoma Steel Corp. Ltd.) (Sault Ste. Marie, Ontario, Canada)	A	Y		Slab	N	1B	8"	Carbon, Alloy, Boron	002	T&SD AMT
ArcelorMittal Dofasco (Formerly Dofasco Steel) (Hamilton, Ontario, Canada)	A	Y		Slab	Y	1B	8.5"	Carbon	068	T&SD AMT
ArcelorMittal USA - Indiana Harbor (formerly ArcelorMittal Indiana Harbor)	A	Y		Slab	Y	1B	10"	Carbon, Alloy	018	T&SD AMT
ArcelorMittal USA - Indiana Harbor Bar Products. (formerly ArcelorMittal Indiana Harbor Bar Product)	A			Billet	N	1A	7" SQ	Carbon, Alloy, Boron,	016	T&SD AMT
	A			Bloom	N	1A	15"x20"	Carbon, Alloy, Boron	016	T&SD AMT
ArcelorMittal Lazaro Cardenas (Formerly Mittal Steel Lazaro Cardenas) (Michoacan, Mexico)	A	Y		Slab	Y	1B	200, 225, and 250 mm	Carbon, Alloy, Boron	095	T&SD AMT
ArcelorMittal - Steelton LLC (formerly Mittal Steel USA, Inc. - Steelton)	A			Bloom	Y	1B	14.6"x 23.6"	Carbon, Alloy, Boron	006	T&SD AMT
Charter Steel (Cuyahoga Heights, OH)	A			Billet	Y	3	5.5" SQ 7" SQ	Carbon	055	T&SD AMT
Charter Steel (Saukville, WI)	A			Billet	Y	1A	5.5" SQ	Carbon, Alloy, Boron Special Cleanliness (1E2661A)	025	T&SD AMT
Evrz Claymont Steel (Formerly Claymont Steel) (Claymont, DE)	A			Slab	N	3	9.75"	Carbon, Alloy	027	T&SD AMT
Evrz Oregon Steel (Portland , OR)	L							Roll Slabs Sourced From Approved Mills	090	T&SD AMT

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Evrz INC NA. Regina Steel (Saskatchewan, Canada)	L			Slab	N	1B	8"	Carbon, Alloy	091	T&ST AMT
Ellwood Quality Steels (New Castle, PA)	A			Ingot	Y			Carbon, Alloy, Boron Special Cleanliness (1E2661A)	057	T&SD AMT
Gallatin Steel (Ghent, KY)	A	Y		Slab	N	1B	55 mm and 65 mm	Carbon, Alloy	011	T&SD AMT
Gerdau Ameristeel (formerly Chaparral Steel) (Midlothian, TX)	A			Billet	N	1B/3 *	6.5" SQ	Carbon, Alloy, Boron	099	T&SD AMT
						* 1B for Al Fine Grain, 3 for V Fine Grain				
Gerdau Ameristeel Manitoba (Formerly Manitoba Rolling Mills) (Selkirk, Manitoba)	A			Billet/Bloom	N	1B	To 16"x 10"	Carbon, Alloy, Boron	063	T&SD AMT
Gerdau MacSteel (Formerly MacSteel) (Ft. Smith, AR)	A			Billet	Y	2A*	5.5-9.5" RD	Carbon, Alloy, Boron, Special Alloy, Special Cleanliness (1E2661A)	038	T&SD AMT
Gerdau MacSteel (Formerly MacSteel) (Jackson, MI)	A			Billet	Y	2A*	4-7" RD	Carbon, Boron, Alloy, Special Alloy, Special Cleanliness, (1E2661A)	087	T&SD AMT
						*Note: Quality Equivalent to 1A				
Gerdau MacSteel (Formerly MacSteel) (Monroe, MI)	A			Billet	Y	1A	6" SQ	Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	072	T&SD AMT
Hamilton Specialty Bar Co. (Hamilton, Ontario, Canada) (formerly Slater Steel)	A			Billet	N	3	5 1/8"x 7 3/8"	Carbon, Alloy	076	T&SD AMT
JSW Steel USA (Formerly Jindal) (Baytown, TX)	L							Roll Slabs Sourced From Approved Mills	044	T&SD AMT
Latrobe Steel Company (Formerly Timken Latrobe) (Latrobe, PA)	A			Ingot	Y			Alloy, Special Cleanliness (1E2661B)	019	T&SD AMT
North Star BlueScope (Delta, OH)	A			Slab	N	1B	3.5"	Carbon, Alloy	098	T&SD AMT
Nucor (Decatur, AL)	A	Y		Slab	N	1A	3.5"	Carbon, Alloy	086	T&SD AMT
Nucor (Hickman, AR)	A	Y		Slab	N	1B	2"	Carbon	093	T&SD AMT
Nucor Berkeley (Huger, SC)	A	Y		Slab	Y	1B	2"	Carbon, Alloy	083	T&SD AMT
Nucor Hertford (Winton, NC)	A	Y		Slab	N	1B	6"	Carbon, Alloy	084	T&SD AMT
Nucor Steel Memphis (Memphis, TN)	L			Bloom	Y	1A	267 mm RD 311 mm RD 343 mm RD 411 mm RD 511 mm RD	Carbon, Alloy, Microalloy Bar	005	T&SD AMT

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Nucor Steel (Norfolk, NE) SBQ Mill Only	A			Billet	Y	1A	6 5/8" SQ	Carbon, Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661A)	085	T&SD AMT
Nucor Tuscaloosa (Tuscaloosa, AL) (Formerly Corus Tuscaloosa)	A	Y		Slab	N	1B	5"	Carbon, Alloy	042	CMS
Republic Engineered Products (Canton, OH)	A		C, M	Bloom	Y	1A	10"X 13" CastRolled	Carbon, Alloy, Boron, Special Alloy, Microalloy Bar, Special Cleanliness, (1E2661B)	028	T&SD AMT
	A			Billet	Y	1A	7"X 7" (Flexcast)	Carbon, Alloy, Boron, Special Alloy, Microalloy Bar, Special Cleanliness, (1E2661A)	028	T&SD AMT
Republic Engineered Products (Lorain, OH)	A			Billet	Y	1B	6" SQ	Carbon, Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661B)	077	T&SD AMT
	A			Bloom	Y	1A	12.2"x 14.6"	Carbon, Alloy, Boron, Microalloy Bar, Special Cleanliness (1E2661B)	077	T&SD AMT
Severstal Columbus (Columbus, MS)	L	Y		Slab	Y	1A	2.65" x 36-74"	Carbon	033	T&SD AMT
Severstal Sparrows Point (Formerly ArcelorMittal Sparrows Point)	A	Y		Slab	N	1B	10" & 12"	Carbon, Alloy, Boron	047	T&SD AMT
Severstal NA (Formerly Rouge, Dearborn, Michigan)	A			Slab	Y	1B	8"	Carbon, Alloy, Boron	094	T&SD AMT
Severstal Warren (Formerly WCI) (Warren, OH)	A			Slab	Y	1B	9"	Carbon, Alloy, Boron	029	T&SD AMT
Sheffield Steel Corp. (Sand Springs, OK)	A			Billet	N	4	4 1/4" SQ	Carbon	049	T&SD AMT
SSAB North American Division (Formerly IPSCO Steel Inc. Mobile) (Axis, AL)	A	Y		Slab	N	1B	6"	Carbon, Alloy	097	T&SD AMT
SSAB North American Division (Formerly IPSCO Steel Inc.) (Muscatine, IA)	A	Y		Slab	N	1B	6"	Carbon, Alloy	026	T&SD AMT
Steel Dynamics, Inc.(Butler, IN)	A			Slab	N	1B	2"	Carbon	003	T&SD AMT
Steel Dynamics, Inc. (Pittsboro, IN)	A			Bloom	Y	1A	14.1"x10.3"	Carbon, Alloy, Boron, Microalloy Bar Special Cleanliness, (1E2661A)	060	T&SD AMT
Steel of West Virginia - SDI Group (Huntington, WV)	A			Billet	N	4	4" – 8" SQ	Carbon	048	T&SD AMT

Figure 3 (Continued On Next Page)

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WROUGHT STEEL – APPROVED SUPPLIERS

DATE
11 NOV 2009

CHG NO
18

NUMBER
1E1861

Approved Steel Suppliers										
Supplier	App Stat	ROPS	Cmnk Shift	Cast Prod	Vac Deg	Cast Cls	As-Cast Size	Steel Grades	Code	Disp Fac
Tubos de Acero de Mexico S.A. (TAMSA) (Veracruz, Mexico)	A			Billet	Y	1B	215, 270, 310, 330, 370 RD	Carbon, Alloy	034	CMS
	A			Ingot	Y		530 & 600 RD	Carbon, Alloy	034	CMS
Ternium (Hylsa) Mexico S.A.	A			Slab	N	1B	54 mm	Carbon, Alloy	088	CMS
The Timken Co., Faircrest Plant (Canton, OH)	A		C, M	Ingot	Y		28" SQ	Carbon, Alloy, Boron, Special Alloy, Microalloy Bar, Special Cleanliness (1E2661B)	031	T&SD AMT
The Timken Co., Harrison Plant (Canton, OH)	A		C, M	Bloom	Y	1A	11"x 14 ¾"	Carbon, Alloy, Boron, Special Alloy, Microalloy Bar, Special Cleanliness (1E2661B)	031	T&SD AMT
US Steel (Div. Of USX Corp.), (Gary, IN)	A	Y		Slab	Y	1B	9", 12"	Carbon, Alloy, Boron	036	T&SD AMT
US Steel Canada Hamilton Works (Formerly STELCO) (Hamilton, Ontario, Canada)	A	Y		Slab	N	1B	9.45"	Carbon, Alloy, Boron	051	T&SD AMT
US Steel Canada - Lake Erie Works (Nanticoke, Ontario, Canada)	L			Slab	Y	1B	9.45"	Carbon, Alloy	054	T&SD AMT
US Steel Granite City Works (Granite City, IL) (formerly National)	A	Y		Slab	N	1B	8.75"	Carbon, Alloy	071	T&SD AMT
South America										
Acos Finos Piratini - Gerdau S.A. (Charqueadas, Rio Grande do Sul, Brazil)	A		M	Billet	Y	1A	150 mm SQ 240 mm SQ	Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661A)	165	T&SD AMT
Acos Villares - Gerdau S.A. (Pindamonhangaba, Brazil)	A			Ingot	Y			Carbon, Boron, Alloy, Microalloy Bar, Special Cleanliness (1E2661B)	157	T&SD AMT
Acos Villares - Gerdau S.A. (Anhanguera, Mogi das Cruzes, Brazil)	A			Billet Btm Prd Ingot	Y	1A	155 mm SQ	Carbon, Boron, Alloy, Special Cleanliness (1E2661A)	154	T&SD AMT
Usiminas (Cubatão, Brazil)	A			Slab	Y	1B	210/260mm	Carbon, Alloy	201	T&SD AMT
Usiminas (Ipatinga, Brazil)	A	Y		Slab	Y	1B	200/250mm	Carbon, Boron, Alloy	185	T&SD AMT
Villares Metals - S.A. (Sumaré, Brazil)	A			Ingot	Y			Boron, Alloy	155	T&SD AMT

Figure 3 (Continued)

Note: Plant codes and abbreviation key are as follows:

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WROUGHT STEEL – APPROVED SUPPLIERS	DATE 11 NOV 2009	CHG NO 18	NUMBER 1E1861

CODES

T&SD AMT =	U.S.A./Canada	MELB =	Melbourne	IMT =	India
SAFR =	South Africa	SAGA =	Sagami	TOS =	Russia
GOSS =	Gosselies	CMS =	Mexico		
GREN =	Grenoble	CMT =	China		

KEY

App Stat = Approval Status, A = Approved, L = Limited Approval

ROPS = Approved to Supply ROPS Material? Y = Yes

Crnk Shft = Approved to Supply Crankshaft Material? Y = Yes or Approval by Steel Type:
C - Carbon Steel for Die Quench, A - Alloy Steel for Through Hardening +
Induction. M - Microalloy

Cast Prod = Cast Product

Vac Deg = Vacuum Degassing Capability? Y = Yes, N = No

Cast Cls = Caster Class Per 1E2700

Disp Fac = Disposition Facility

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WROUGHT STEEL – APPROVED SUPPLIERS

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Approved Suppliers for Tubular Products		
Supplier	Manufactured Type	Code
ArcelorMittal Shelby 123 W. Main St. Shelby, OH 44875	Electric Resistance Welded Cold Drawn Seamless Hot Finished Seamless Drawn-Over-Mandrel	023
AK Tube 30400 East Broadway Walbridge, OH 43465	Electric Resistance Welded for Low Pressure Applications*	064
ALESIO TUBI-ARCELOR Group 10040 La Loggia, Statale n20 Km 4 Torino, Italia	Structural ROPS	265
Atlas (formerly Copperweld) 1855 E. 122 nd St. Chicago IL, 60633	Structural ROPS	053
Atlas Tube 200 Clark St. Harrow, ON N0R1G0	Structural	008
Atlas Tube Blytheville, AR 72315	Structural ROPS	004
BoaShan Iron & Steel Co., LTD Steel Tube Subcompany (Shanghai, P.R.C.)	Hot Finished Seamless	227
Bull Moose Elkhart, IN 46515	Structural	065
Corus Tubes - CorbyWorks P.O. Box 101 Weldon Road Corby, England NN175UA	Structural ROPS	215
Hubei Xinyegang Co., Ltd. Steel Tube Plant Huangshi, Hubei, P.R. China	Hot Finished Seamless	219
ISMT Ltd Eden Park, Viman Nagar Pune – 411014, India	Structural & ROPS Cold Drawn Seamless Hot Finished Seamless	268

Figure 4 (Continued On Next Page)

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WROUGHT STEEL – APPROVED SUPPLIERS	DATE 11 NOV 2009	CHG NO 18	NUMBER 1E1861

Approved Suppliers for Tubular Products		
Supplier	Manufactured Type	Code
Jackson Tube Service 8210 Industry Park Drive Piqua, OH 45356	Electric Resistance Welded	096
JFE Tubing - Fukuyama (formerly Nippon Kokan Tubing), Fukuyama, Japan	Hot Finished Seamless Submerged Arc Welded (SAW)	274
Katakura Steel Tube** 14-12, 6-Chome, Mitejima Nishiyodogawa-Ku Osaka, Japan	Drawn-Over-Mandrel Cold Drawn Seamless	188
Maruichi Steel Tube Ltd. 16 Ishizu Nishi-Machi Sakai Osaka, Japan	Electric Resistance Welded ROPS	249
Metal-Matic Inc. Bedford Park, IL	Electric Resistance Welded Drawn-Over-Mandrel	040
Metal-Matic Inc. 62 92 nd Street, SE Minneapolis, MN 55414	Electric Resistance Welded Drawn-Over-Mandrel	040
Metal Sections Ltd. Broadwell Rd. Oldbury, W. Midlands B694HE England	Structural ROPS	224
Nippon Steel Metal Products Co. Ltd. 17-12 Kiba 2 Chome Koto-Ku Tokyo, Japan	Electric Resistance Welded ROPS	218
Plymouth Tube Company Winamac, IN	Hot Finished and Cold Drawn Seamless	013
Plymouth Tube Company Streator, IL	Drawn-Over-Mandrel Cold Drawn Seamless	014
Plymouth Tube Co. Industrial Park Rd. Europa, MS 39744	Electric Resistance Welded ¹ Drawn-Over-Mandrel ¹ 1 = For Hydraulic Applications Only	059

Figure 4 (Continued On Next Page)

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WROUGHT STEEL – APPROVED SUPPLIERS	DATE 11 NOV 2009	CHG NO 18	NUMBER 1E1861

Approved Suppliers for Tubular Products		
Supplier	Manufactured Type	Code
Productos Tubulares S.A.*** Carretera Galindoa Ugarte 48510 Vallede Trapaga (Vizcaya) Spain	Pilger Mill Seamless	203
PTC Alliance P.O. Box 2298 640 Keystone St. Alliance, OH 44601	Electric Resistance Welded Drawn-Over-Mandrel	009
PTC Alliance Beaver Falls Plant 4400 West Third Avenue Beaver Falls, PA 15010	Drawn-Over-Mandrel Cold Drawn Seamless	009
PTC Alliance 500 Frank Yost Lane Hopkinsville, KY 42240	Drawn-Over-Mandrel	009
Roll Forming Corporation (RFC) 1205 North Access Road Jeffersonville, IN 47130	Structural ROPS	079
Sadef Bruggesteeweg 60 8-8830 GITS Belgium	Structural ROPS	225
Showa Steel Tube Works 3-158 Kaisan-Cho Sakai City Osaka Japan	Drawn-Over-Mandrel Cold Drawn Seamless	138
Structo Box 1003 Storfors, S-68829, Sweden	Cold Drawn Seamless	213
Sumitomo Metal Industries Ltd.** Wakayama Steel Works 1850 Minato Wakayama, Japan	Hot Finished Seamless Cold Drawn Seamless	152
Tubos de Acero de Mexico S.A. (TAMSA) Veracruz, Mexico	Hot Finished Seamless	034

Figure 4 (Continued On Next Page)

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WROUGHT STEEL – APPROVED SUPPLIERS	DATE 11 NOV 2009	CHG NO 18	NUMBER 1E1861

Approved Suppliers for Tubular Products		
Supplier	Manufactured Type	Code
Tenaris (formerly DST - SidocaCorp.) P.ZZA Caduti 6 Lugilio 44 I-24044 DalmineBg Italy	Cold Drawn Seamless Hot Finished Seamless	114
The Timken Co 1835 Dueber Avenue, S.W. Canton, OH 44706	Hot Finished Seamless	031
Tube Products of India (Exports Division) Post Box No.18, Avadi Chennai - 600 054,India	Cold Drawn Welded Electric Resistance Welded	266
Tubeurop Usine de Lexy B.P. 1 54720 Lexy France	Structural ROPS	206
USS Tubular Products (Formerly Lone Star Steel Co.) U.S. Highway 259 South LoneStar, TX 75668	Electric Resistance Welded Drawn-Over-Mandrel	062
Tubofil Trefilação S.A. Rua Tamotsu Inwasse, # 460 Bonsucesso – Guarulhos, SP Brasil	Structural, ROPS Cold Drawn Seamless Drawn Over-mandrel Hot Finished Seamless Electric Resistance Welded	250
V&M do Brasil S.A. Av. Olinto Meireles, # 65 Belo Horizonte - MG Brasil	Structural Cold Drawn Seamless Hot Finished Seamless	156
Vallourec & Mannesmann Tubes V & M Deutschland GmbH Rather Kreuzweg 106 / 40472 Düsseldorf Germany	Hot Finished Seamless	291

Figure 4 (Continued On Next Page)

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WROUGHT STEEL – APPROVED SUPPLIERS	DATE 11 NOV 2009	CHG NO 18	NUMBER 1E1861

Approved Suppliers for Tubular Products		
Supplier	Manufactured Typed	Code
VALLOUREC & MANNESMANN TUBES V & M DEUTSCHLAND GmbH (Continuous Mandrel Mill Mülheim) Germany	Hot Finished Seamless	293
VALLOUREC & MANNESMANN TUBES V & M DEUTSCHLAND GmbH The Dusseldorf-Reisholz Works Henkelstr. 209 40599 Dusseldorf Germany	Hot Finished Seamless	292
V & M Tubes France - Aulnove Mill**** 64 Rue De Leval B.P. #159 59520 Aulnoye Aymeries France	Hot Finished Seamless	210
V & M Tubes France - Deville Mill**** 42 Rue Laveisiere B.P. #14 76250 Deville Les Rouen Cedex France	Hot Finished Seamless	211
V & M Tubes France**** Saint Saulve Tube Mill Zone Industrielle No. 4 B.P.#2 59880 Saint Saulve Cedex France	Hot Finished Seamless	212
Vallourec Composants**** Automobile Hautmont 12 Rue Des Usines B.P.#127 59330 Hautmont France	Electric Resistance Welded	111
Vallourec Industries - Laigneville Mill**** Usine 3, Place de La Gare B.P. #8 60290 Laigneville France	Drawn-Over-Mandrel	112
Vallourec Précision Etirage Usine Z.I. Vitry Marolles - B.P. 77 51303 Vitry Le François	Drawn Over Mandrel	251

Figure 4 (Continued On Next Page)

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Approved Suppliers for Tubular Products		
Supplier	Manufactured Typed	Code
Voest Alpine Schmidhutzenstrasse No. 5 3502 Krems Lerchenfeld Austria	Structural ROPS	207
Welded Tube of Canada 111 Rayette Road Concord Ontario, Canada	Structural ROPS	061
Welser Profile A-3341 Ybbsitz Austria	Structural ROPS	246

Figure 4 (Continued)

NOTE* Tubes for low pressure applications are defined as the tubes with hardness HRB 65 Max

U.S.A. Sales/Marketing

NOTE** MC Tubular Products
580 Westlake Park Boulevard, Suite 1610
Houston, TX 77079

U.S.A. Sales

NOTE *** Metalloy Company, Inc.
801 W. Estes Ave.
Schaumburg, IL 60193

U.S.A. Sales/Marketing

NOTE **** V & M Tubes Corp.
414 Ailagheny River Boulevard, Suite 202
Oakmont, PA 15139

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WROUGHT STEEL – APPROVED SUPPLIERS

DATE
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Approved Flat Steel Processors	
Supplier	Process Type
Central Coil Processing LLC 501 George Nelson Drive Portage, IN 46368	Temper Mill
Feralloy 1020 North Steel Circle Huger, SC 29450	Level Line
Feralloy Processing Company 600 George Nelson Drive Portage, IN 46368	Temper Mill
Feralloy Processing Company, Midwest Division 6755 Waterway Portage, IN 46368	Temper Mill
Namasco 1090 North Steel Circle Huger, SC 29450	Level Line
Olympic Steel 6425 State Street Bettendorf, IA 52722	Temper Mill
Olympic Steel 5080 Richmond Road Bedford Heights, OH 44146	Temper Mill
Robinson Steel Company, Inc Corporate Headquarters 4303 Kennedy Avenue East Chicago, IN 46312	Temper Mill
Robinson Steel Company, Inc. GC1 Manufacturing Facilities 2325 North Street Extension Granite City, IL 62040	Temper Mill

Figure 5 (Continued On Next Page)

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WROUGHT STEEL – APPROVED SUPPLIERS	DATE 11 NOV 2009	CHG NO 18	NUMBER 1E1861

Approved Flat Steel Processors	
Supplier	Process Type
Robinson Steel Company, Inc. GC2 Manufacturing Facility 333 Old Rock Road Granite City, IL 62040	Temper Mill
Steel Warehouse 2722 West Tucker Drive South Bend, IN 46624	Temper Mill
Steel Warehouse 4305 81 st Ave West Rock Island, IL 61201	Temper Mill
Steel Warehouse 4768 Hungerford Road Memphis, TN 38175-2510	Temper Mill
Steel Warehouse 600 River Terminal Road Chattanooga, TN 37406	Temper Mill
Steel Technologies 307 Industrial Drive Clinton, NC 28328	Level Line
Worthington Steel 100 Worthington Dr. Porter, IN 46304	Temper Mill

Figure 5 (Continued)

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WROUGHT STEEL – APPROVED SUPPLIERS	DATE 11 NOV 2009	CHG NO 18	NUMBER 1E1861

Approved Steel Service Centers	
Addresses listed below represent the main branch location for each supplier. Refer to suppliers stock list or catalog for additional branch locations.	
Supplier	Product Form
Allsteel/Steel Industries 26555 Fullerton Redford, MI 48239	Custom Forged Large Diameter Bars
Alro Steel Corporation* 3100 E. High Street Jackson, MI 49204	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Plate, Carbon & Alloy Sheet, Hot & Cold Rolled Structural Shapes Tubing Tool Steel
A.M. Castle & Co.* 3400 N. Wolf Road Franklin Park, IL 60131 Note: A.M. Castle & Co. Merged with Hy-Alloy Steels Co.	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Plate, Carbon & Alloy Tubing, Carbon & Alloy
Capital Steel & Wire, Inc 3121 W Circle Dr, Ste 300 Lansing, MI 48906	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Plate
Carbon & Alloy Steel 24045 S. Central Ave. Monee, IL 60449	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Tubing, Carbon & Alloy
Central Steel & Wire Co.* 3000 W. 51st Street Chicago, IL 60632-2198	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Plate, Carbon & Alloy Sheet, Hot & Cold Rolled Structural Shapes Tubing, Carbon & Alloy Pipe

Figure 6 (Continued On Next Page)

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WROUGHT STEEL – APPROVED SUPPLIERS	DATE 11 NOV 2009	CHG NO 18	NUMBER 1E1861

Approved Steel Service Centers	
Addresses listed below represent the main branch location for each supplier. Refer to suppliers stock list or catalog for additional branch locations.	
Supplier	Product Form
Chapel Steel 1101 E. 5000 N. Bourbonnais, IL 60914 800-770-7280 708-799-9100 FAX	Plate, Carbon & Alloy
Chicago Tube & Iron Co.* 1040 W. 11th Street Milan, IL 61264	Cold Finished Bars, Carbon & Alloy Tubing, Carbon & Alloy
Cincinnati Tool Steel 5162 28th Ave. Rockford, IL 61125	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Tool Steel
Earle M. Jorgensen Co.* 1900 Mitchell Boulevard Schaumburg, IL 60193 Note: Earle M. Jorgensen Co. Merged with Kilsby - Roberts Co.	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Tubing, Carbon & Alloy
Eaton Steel 10221 Capital Oak Park, MI 48237	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy
Edgecomb Metals P.O. Box 2904 420 Memory Lane York, Pa 17402	Tubing, Carbon & Alloy
Genzink Steel 40 E. 64th St. Holland, MI 49423-9322	Plate, Carbon & Alloy
Hagerty Steel & Aluminum 601 N. Main Street East Peoria, IL 61611	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Plate, Carbon & Alloy Sheet, Hot & Cold Rolled Structural Shapes, Tubing

Figure 6 (Continued On Next Page)

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Approved Steel Service Centers	
Addresses listed below represent the main branch location for each supplier. Refer to suppliers stock list or catalog for additional branch locations.	
Supplier	Product Form
Heidtman Steel Products * 10 Northgate Industrial Dr. Granite City, IL 62040	Hot Rolled, Cold Rolled and Coated Steel Plate, Strip and Sheet Pickled or Black Finish
Hy - Alloy Steels Co.* 5100 W. 73rd Street Chicago, IL 60638	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Tubing, Carbon & Alloy
J.T. Ryerson & Sons, Inc.* 2558 W. 16th Street Chicago, IL 60608	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Plate, Carbon & Alloy Sheet, Hot & Cold Rolled Structural Shapes Tubing, Carbon & Alloy, Pipe
J. Rubin 305 People's Ave. Rockford, IL 61110	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy
Kenilworth Steel* 2275 Half Day Rd., Suite 350 Bannockburn, IL 60015	Plate, Carbon & Alloy
Keystone Tube Co. 13527 S. Halsted Chicago, IL 60603	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Tubing, Carbon & Alloy
Kreher Steel Company* 1550 N. 25 th Avenue Melrose Park, IL 60160	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy
Lapham-Hickey Steel Corp. 5500 West 73rd Street Chicago, Illinois 60638 1-800-323-8443	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Structural Shapes, Carbon Tubing, Strip Steel, Hot and Cold Rolled Annealed, Sheet Steel, Plate, Stainless Steel
LEECO Steel Products, Inc. 1600 S. Kostner Avenue Chicago, IL 60623	Plate, Carbon & Alloy

Figure 6 (Continued On Next Page)

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Approved Steel Service Centers	
Addresses listed below represent the main branch location for each supplier. Refer to suppliers stock list or catalog for additional branch locations.	
Supplier	Product Form
Liebovich Brothers 2116 Preston St. Rockford, IL 61102	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Plate, Carbon & Alloy
Marmon/Keystone* 10700 Marmon Drive Bollingbrook, IL 60440	Tubing, Carbon & Alloy Pipe
National Tube Supply Co 925 Central Ave University Park, IL 60466	Tubing, Carbon & Alloy Pipe
O'Brien Steel Service 1800 N.E. Adams Street P.O. Box 5699 Peoria, IL 61601	Hot Rolled Bars, Carbon & Alloy Plate, Carbon & Alloy Structural Shapes
Olympic Steel Co.* 625 Xenium Lane North Plymouth, MN 55441	Plate, Carbon & Alloy Sheet, Hot & Cold Rolled
O'Neal Steel, Inc.* P.O. Box 2623 Birmingham, AL 35202	Hot Rolled Bars, Carbon & Alloy Cold Finished Bars, Carbon & Alloy Plate, Carbon & Alloy Sheet, Hot & Cold Rolled Structural Shapes Tubing
R.L. Perlow Steel Corp. 2900 S. 25th Avenue Broadview, IL 60153	Hot Rolled Bars, Carbon & Alloy
Russell Metals* 975 N. Meade St. Appleton, WI 54912	Plate, Carbon & Alloy

Figure 6 (Continued)

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Approved Steel Service Centers	
Addresses listed below represent the main branch location for each supplier. Refer to suppliers stock list or catalog for additional branch locations.	
Supplier	Product Form
Steel Warehouse Company, Inc. 2722 W. Tucker Dr. South Bend, IN 46624	Hot Rolled, Cold Rolled and Galvanized Steel, Plate, Strip, and Sheet with Ability for Pickling, Temper Mill/Leveling, Temper Pass & Leveling
Tubular Steel, Inc. 1031 Executive Parkway Drive St. Louis, MO 63141-9200	Tubing, Carbon and Alloy Pipe Polished Stainless Steel Tubing

Note*: Indicates multiple-plant company where approval status applies to all facilities.

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WROUGHT STEEL – APPROVED SUPPLIERS	DATE 11 NOV 2009	CHG NO 18	NUMBER 1E1861

Caterpillar Dispositioning Facilities			
U.S.A./Canada	<p>Caterpillar Inc. Quality Services Building MM-2, Dock ML 100 Tractor Drive East Peoria, IL 61630-7650</p> <p>Phone: 309-675-2003 or 309-675-2010 Fax: 309-675-3974 Email: quality_services@cat.com</p>	Gosselies	<p>Caterpillar Belgium S.A. 1, Avenue Des Etats-Unis 6200 Gosselies Belgium</p> <p>Phone: 011-32-71-25-3466 Fax: 011-32-71-25-3295 or 011-32-71-25-2144</p>
Grenoble	<p>Caterpillar France S.A. 40-48 Avenue Leon Blun B.P. 55X 38041 Grenoble Cedex 9 France</p> <p>Phone: 011-33-4-76-23-74-45 Fax: 011-33-4-76-23-72-07</p>	Melbourne	<p>Caterpillar of Australia, Ltd. 1 Caterpillar Drive Tullamarine, Victoria 3043 Australia</p> <p>Fax: 011-61-3-9335-3806</p>
Mexico	<p>Caterpillar Mexico S.A. De C.V. Apartado Postal 237 Santa Caterina, N.L. Mexico C.P. 66350</p> <p>Phone: 011-52-83-19-3348 or 011-52-83-19-3316 Fax: 011-52-83-19-3399</p>	Sagami	<p>Shin Caterpillar Mitsubishi Ltd. 3700 Tana Sagamihara-shi Kanagawa 2291192 Japan</p> <p>Phone: 011-81-427-62-1121 Fax: 011-81-427-62-3065</p>
South Africa	<p>Caterpillar (Africa)(Pty Ltd.) P.O. Box 197 Isando, 1600 Trasvaal Republic of South Africa</p> <p>Phone: 011-27-11-974-3381 Fax: 011-27-11-392-1490</p>	Tosno	<p>Caterpillar Tosno 18700 Saint Petersburg Leningradskaya obl., Tosno, Moskovskoye Shosse, 1/1</p> <p>Phone: 7-812-118-4210 Fax: 7-812-118-4215</p>

Figure 7 (Continued On Next Page)

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Caterpillar Dispositioning Facilities			
China	<p>China Materials Technology No. 169 Hai Bin Jiu Road Tianjin Port Free Trade Zone Tianjin, P.R. China 300456</p> <p>Phone: 86-22-5988-2216 Fax: 86-22-5988-2606 Email: china_steel_quality@cat.com</p>	<p>Morton "For Parts Sales Steel Only"</p>	<p>Caterpillar Inc. 500 N. Morton Ave. MT333 Morton, IL 61550</p> <p>Phone: 309-266-3833</p>
India	<p>Caterpillar India Private Ltd. India Materials Technology Melnallathur, Thiruvallur Tamilnadu Pin – 602004 India</p> <p>Phone: 91-44-47600151 Ext. 4151 Fax: 91-44-47600444</p>		

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