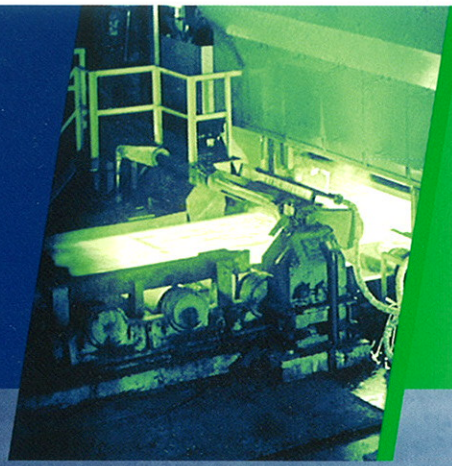
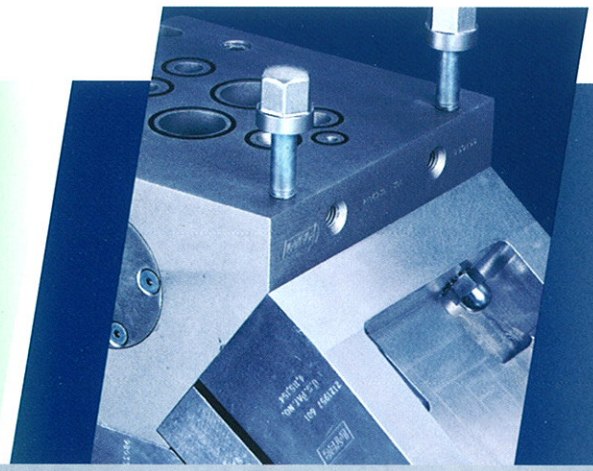
L-TEC
STEEL INDUSTRY PRODUCTS





SUPERIOR SURFACES FOR SUPERIOR PRODUCTS.

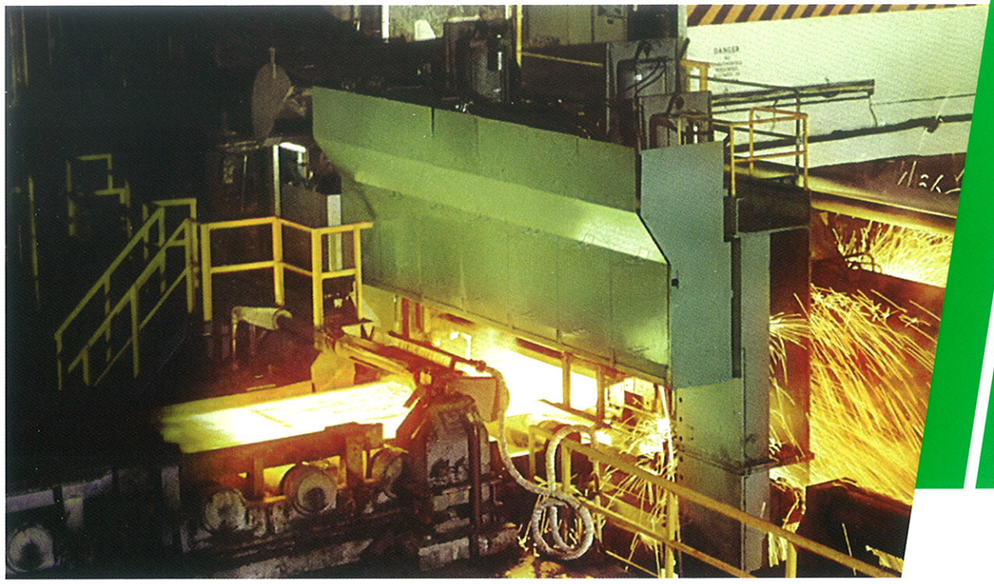
Scarfing machines for conditioning carbon and alloy steels.

Unmatched excellence in scarfing machines.

L-TEC Steel Industry Products is a world leader in the manufacturing of mechanized scarfing machines and related equipment. With more than 120 scarfing machines in operation worldwide, L-TEC has pioneered the technology that today helps steel mills minimize defects and produce more high-quality steel – yielding less scrap and more satisfied customers. Whether your application demands the highest quality steel surfaces, or you simply want to maximize the quality you deliver to your customers, scarfing may be the answer. L-TEC is the name you can rely on for quality, integrity, and service.

L-TEC – OVER 75 YEARS AND STEEL PERFECT.
MADE IN THE USA.

WHAT IS SCARFING?



The steel industry continually seeks to improve surface quality to meet more rigid customer specifications. To provide customers with steel of the highest quality, steel makers condition their steel using a thermochemical exothermic reaction of oxygen and fuel gas. This process, known as scarfing, is a highly efficient process that removes surface defects from cast steel. A number of surface conditioning options exist, including manual scarfing, robotic scarfing, grinding, and mechanized scarfing. Of these options, the most cost effective and productive method to meet today's rigid specifications reliably and economically is mechanized scarfing.

WHY SCARF?

Although most casting equipment manufacturers would like you to believe that scarfing is not necessary if casters are properly maintained and operated, they promise only 85% defect-free product – meaning as much as 15% can have defects. When you want to minimize the number of defects in your cast steel, scarfing can be used in the production of:

- **Slabs** – that become high-quality sheet used for cosmetic and thin-walled products that requires superior surface finish and are with minimal voids or inclusions. End-use applications include automotive (interstitial-free) sheet, appliance grade sheet, pipelines, ship plate, and thin-drawn steel cans.
- **Billets, blooms, and ingots –** that become special bar quality (SBQ) steel. End-use applications include engineered steel products such as bearings, crankshafts, gears, steering rack bars, hubs, and connecting rods.

Mechanized near-end starts on cast slabs.

L-TEC products help steelmakers deliver high-grade interstitial-free slabs that are rolled into automotive-grade steel.

WHY L-TEC?

L-TEC Steel Industry Products is a world-leading manufacturer of mechanized scarfing machines and related equipment. With more than 120 machines currently in operation worldwide, L-TEC has pioneered the technology that today helps steel mills minimize defects and produce more high-quality steel – yielding less scrap and more satisfied customers.

Our first production machine was built and installed in 1935. Many years and hundreds of patents later, L-TEC offers the most complete and versatile line of rugged and dependable machines to maximize steel surface quality. Every L-TEC scarfing machine is made in the USA, and our dedication to continued research, development, and service is supported by a complete scarfing laboratory and worldwide service organization of experienced field engineers.

We offer three major categories of mechanized scarfing machines: hot scarfers, cold scarfers, and spot/band-pass scarfers. All three categories are available in four-sided and two-sided options. In addition, L-TEC is the only company to offer four-sided mechanized scarfing systems – in which all four sides of a slab are scarfed simultaneously for optimum throughput. These machines are capable of scarfing 200,000 tons of steel per month.

Whether your customers demand the highest quality steel surfaces or you simply want to maximize the quality you deliver on a regular basis, scarfing may be the answer. And L-TEC is the name you can rely on for quality, integrity, and service.

HOT SCARFING MACHINES.

Hot scarfing removes defects from slabs, blooms, and billets at an elevated temperature. More commonly, the term “hot scarfing” has come to mean mechanized, oxyfuel gas desurfacing of steel that is at or near rolling temperature – normally about 2000°F (1092°C) – as carried out in the production line. Mechanized hot scarfing has become an invaluable tool for the steel industry, as it drastically reduces or eliminates the need for manual secondary conditioning.

Hot scarfing typically removes 1/16 to 3/16 in (1.5 to 4.5 mm) of metal in a single pass. The depth of cut depends upon the scarfing speed employed, as well as the temperature and analysis of the steel. Hot scarfing speeds range from 50 to 250 ft (15 to 76 m) per minute. At such speeds, steel can be conditioned as part of the production process. Steel can flow from ingot, through slabbing or blooming, through conditioning, and to finishing mills continuously.

The smooth, clean surface produced on the steel is unmatched in quality and can be reliably produced with economy and speed. Virtually all types of surface defects can be removed, including those that are invisible to the naked eye. On high-carbon alloy blooms and billets, L-TEC’s hot scarfing machines remove the decarb layer produced when reheating prior to rolling.

THE L-TEC DIFFERENCE.

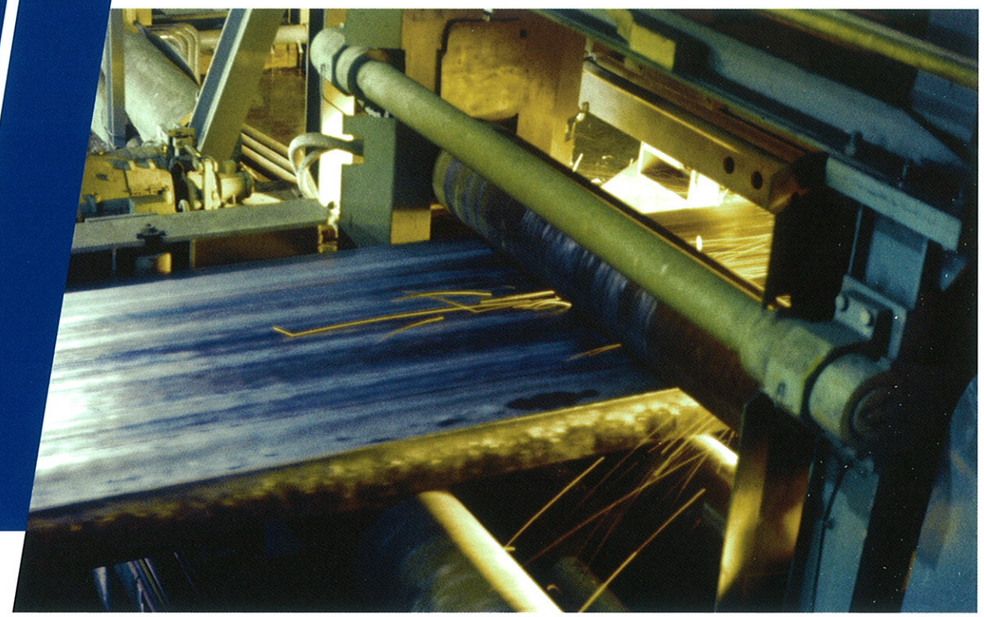
L-TEC hot scarfing machines are remotely controlled, pass-through-type machines. They are designed to be mounted on rails transverse to the roll table, and can be retracted from the production line by the operator for service. Generally, it is recommended that these machines be used to scarf semi-finished steel sections longer than 16.4 ft (5 m) long.

All L-TEC hot scarfing machines feature high-pressure water jets that efficiently remove and granulate the scarfing slag from the steel surfaces. Many additional proprietary features are available in these versatile machines such as self-sizing, automatic oxygen and fuel gas valving, and our EPC (electronic process control) system.

Many customer-specific options are also available, including:

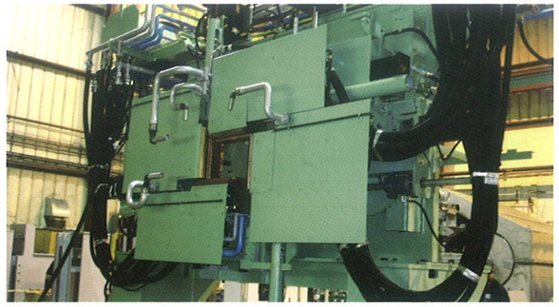
- **Heavy corner removal**
  (Patent no. 5,520,370)
- **HMI (Human Machine Interface)** – PLC systems that can communicate with level 1, 2, and 3 computer systems
- **Near-end start or end start scarfing units**
- **Our patented smooth surface finish**
  (Patent no. 6,174,491)

Every L-TEC scarfing system is backed by more than 50 years of successful experience in planning, commissioning, and maintaining the equipment. All machines and equipment are ruggedly built to withstand severe operating conditions and ensure dependable service.



CM-58 SCARFING MACHINE.

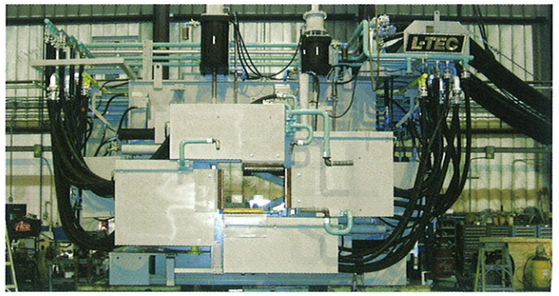
The CM-58 hot scarfing machine scarfs four sides of blooms, billets, and ingots. Featuring numerous proprietary features, the CM-58 is the latest in bloom and billet scarfing design. This machine automatically sizes by direct contact with the steel, as well as simultaneously selects the number of gas ports appropriate to the sectional size to be scarfed. The CM-58 is recommended for use in billet and blooming mills where the product to be scarfed falls within its capacity range.



Machine Model	Thickness	Width
CM-58A	2 to 10-7/8 in (51 to 276 mm)	4 to 10-7/8 in (102 to 276 mm)
CM-58B	2 to 14-7/16 in (51 to 367 mm)	4 to 14-7/16 in (102 to 367 mm)

CM-71 SCARFING MACHINE.

The CM-71 hot scarfing machine scarfs the four sides of small slabs and large blooms. It includes the features of the CM-58 but offers a more rugged structure for increased capacity. This machine is recommended for use in blooming mills where production is heavy and the product to be scarfed exceeds the capacity of a CM-58 but does not require a full-size slab scarfing machine.



Machine Model	Thickness	Width
CM-71-2	2-1/2 to 21-9/16 in (64 to 548 mm)	4 to 21-9/16 in (102 to 548 mm)
CM-71-3	2-1/2 to 21-9/16 in (64 to 548 mm)	4 to 32-1/4 in (102 to 819 mm)
CM-71-4	2-1/2 to 21-9/16 in (64 to 548 mm)	4 to 42-15/16 in (102 to 1091 mm)

COLD SCARFING METHODS.

Cold scarfing is the removal of defects from cast slabs at ambient temperature. More commonly, the term "cold scarfing" has come to denote mechanized oxyfuel gas desurfacing of steel that is outside the rolling line and at less than rolling temperature. The temperature may range from ambient to warm (nominally 70°F/21°C to about 1400°F/760°C). Typically, cold scarfing removes 1/16 to 3/16 in (1.5 to 4.5 mm) of metal in a single pass. The depth of cut depends upon the scarfing speed employed, as well as the temperature and analysis of the steel. Cold scarfing speeds normally range from 25 to 130 ft (8 to 40 m) per minute. Slabs are usually first cut to length, then scarfed, preferably while they retain heat but are "black." This treatment not only removes most of the defects from the steel but also allows the cold scarfing process to be used as an invaluable inspection tool. When the steel is scarfed at temperatures below 750°F (400°C), rescaling does not occur, leaving a surface ideally suited for inspection.

L-TEC – providing you more than a machine.
A typical cold scarfing machine package as supplied by L-TEC includes not only the machine and its related auxiliaries, but also the benefit of more than 75 years of successful experience in every phase of mechanized scarfing to assist in planning, commissioning, and maintaining the equipment. All machines and equipment are ruggedly built to ensure dependable service under severe operating conditions.

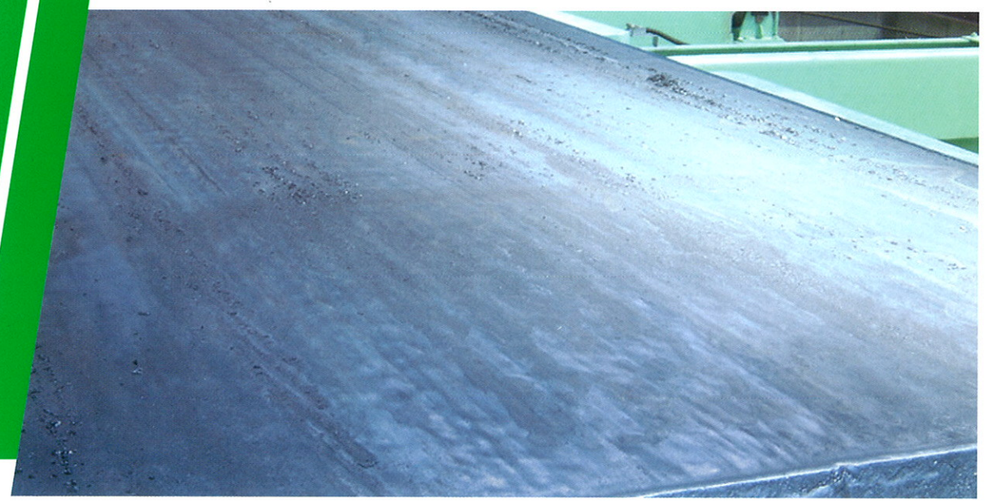
L-TEC's cold scarfing machines are remotely controlled machines designed to be mounted on rails transverse to the roll table and can be retracted from the roll table line by the operator to facilitate service. These machines are capable of scarfing steel in a broad range of temperatures, from ambient to hot rolling temperature (70°F/21°C – 2000°F/1092°C). Two types of machines are available: overhead machines for scarfing the top and one edge of a slab in one pass and pass-through machines for scarfing all four sides of slabs in a single pass. The recommended minimum length slab to be scarfed with overhead machines is 13.8 ft (4.2 m), and with the pass-through machines is 16.4 ft (5 m) in order to ensure good slab transport while scarfing. This also minimizes the number of starts required, conserves gas, and makes high production rates possible. The mill provides smoke cleaning and slag removal facilities.

Standard features include:

- **Self-sizing**
- **Automatic oxygen and fuel gas valving**
- **Cross-fire slag water jets**
- **EPC (electronic process control) systems**

Customer-specific options available:

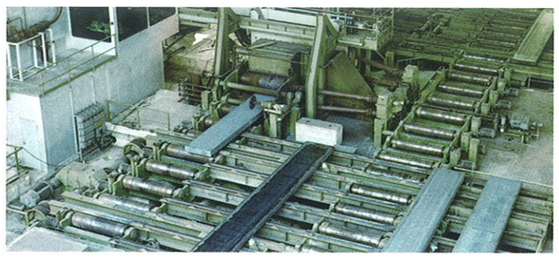
- **Heavy corner removal**
  (Patent no. 5,520,370)
- **HMI (Human Machine Interface)** – PLC systems that can communicate with level 1, 2, and 3 computer systems
- **End start or near-end start scarfing units**
- **Our patented smooth surface finish**
  (Patent no. 6,174,491)



CM-69 SCARFING MACHINE.

The CM-69 is a rugged, overhead machine that will simultaneously scarf the top and one edge of cold or warm continuous-cast or rolled slabs. For high production, it is desirable to employ two machines in one of several possible arrangements. For lower tonnages, a single machine may be employed. In either case, slabs must be turned over between passes if all four sides are to be scarfed.

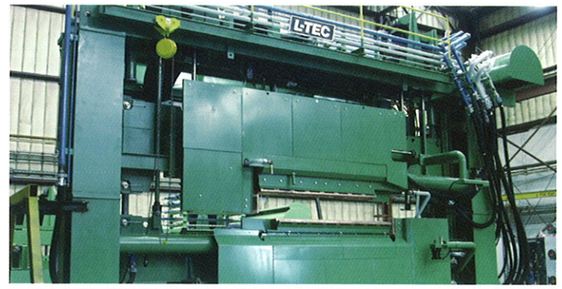
The CM-69 machine automatically adjusts itself to the proper size and gas coverage required by the thickness of slab to be scarfed. Gas coverage to suit the slab width is controlled from the operator's pulpit. Scarfing starts at the end of clean, flat slabs that have a square, uniform end, such as flame cut continuous-cast slabs, properly positioned by the roll table. No part of the slab need be left unscarfed after the slab is turned over and the remaining two sides are scarfed.



Machine Model	Thickness	Width
CM-69-6	3 to 21-9/16 in (76 to 548 mm)	15-5/8 to 64-5/16 in (400 to 1633 mm)
CM-69-7	3 to 21-9/16 in (76 to 548 mm)	15-5/8 to 75 in (400 to 1905 mm)
CM-69-8	3 to 21-9/16 in (76 to 548 mm)	25-1/2 to 85-11/16 in (650 to 2177 mm)
CM-69-9	3 to 21-9/16 in (76 to 548 mm)	31-1/2 to 96-3/8 in (800 to 2448 mm)

CM-90 SCARFING MACHINE.

The CM-90 is a pass-through machine that simultaneously scarfs all four sides of cold, warm, or hot continuous-cast or rolled slabs. Depending on the type of scarfing unit selected, the machine is capable of making near end (1.5 in or 40 mm from the leading edge) or end starts directly on the leading edge of flat, clean slabs. It can also automatically adjust itself to the proper size and gas coverage required for the slab cross section to be scarfed.



Machine Model	Thickness	Width
CM-90-6	6 to 21-9/16 in (153 to 548 mm)	25-1/2 to 64-5/16 in (650 to 1633 mm)
CM-90-7	6 to 21-9/16 in (153 to 548 mm)	25-1/2 to 75 in (650 to 1905 mm)
CM-90-8	6 to 21-9/16 in (153 to 548 mm)	31-1/2 to 85-11/16 in (800 to 2177 mm)
CM-90-9	6 to 21-9/16 in (153 to 548 mm)	31-1/2 to 96-3/8 in (800 to 2448 mm)

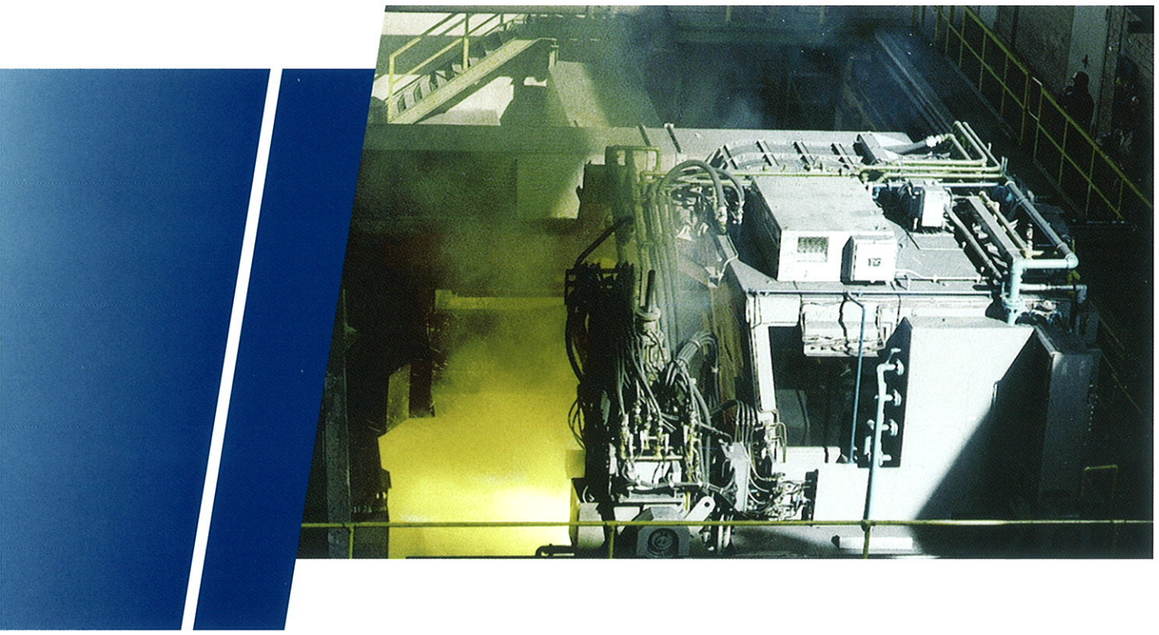
BAND-PASS AND SPOT SCARFING MACHINES.

Band pass scarfing refers to the removal of defects in individually selected bands along the length of slabs and blooms. Mechanized spot scarfing refers to the removal of randomly located defects from slabs and blooms. L-TEC scarfing machines with individually selected scarfing units spot scarf random defects from the slab surface. They are also used to band pass scarf individual bands along the length of the slab where defects are commonly located, such as along the corner surfaces of cast slabs. These processes, developed by L-TEC, reduce yield-loss while still producing high-quality product to meet the demands of today's competitive steel industry. Several types of machines may be custom tailored to a particular application.

Overhead machines are designed for two-sided or top-only scarfing. Pass-through machines are designed for four-sided scarfing operations. Both types can make end starts at the leading end of flat slabs that have a square uniform end or conventional starts sufficiently in from the leading end on unsheared hot rolled slabs.

L-TEC's most sophisticated machines are capable of single pass, full scarfing coverage of either two or four sides of slabs or blooms from ambient to hot rolling temperature (70°F/21°C–2000°F/1092°C). These machines utilize the latest technology in programmable logic controllers with the ability to communicate with level 1, 2, and 3 computers, and are fitted with individually controlled scarfing units for band pass operation scarfing. They also provide automatic selective spot scarfing when effective automatic defect detection technology becomes available. Precision gas control is maintained using our EPC (electronic process control) systems.

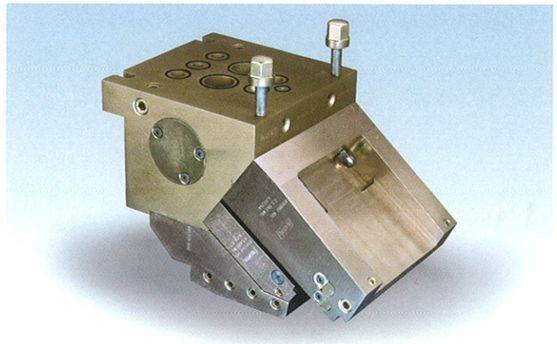
L-TEC also offers scarfing machines that are designed primarily for mechanized spot scarfing applications. These machines greatly reduce the disadvantages of low productivity and high operating costs associated with hand scarfing to remove random defects from semi-finished steel. Several patented features make mechanized spot scarfing an effective and superior method of scarfing. These include a simple effective method for making flying starts on cold steel and a spot scarfing unit that produces fin-free cuts so that virtually no additional clean up is required before the steel can be finish rolled, regardless of whether an individual cut or multiple adjacent cuts are made. The spot scarfing units are especially noted for the absence of gouging at the flying start and for the cleanliness of these wide, smoothly blended fin-free cuts. Flying starts are possible at full scarfing speed.



THE SPOT SCARFING UNIT.

The single most important item on L-TEC band pass or spot scarfing machines is the Spot Scarfing Unit (SSU). This patented scarfing unit is available in three sizes, #4, #8, and #9, providing scarfing coverages of 4 1/8 in (105 mm), 8 1/4 in (210 mm) and 10 5/8 in (270 mm) respectively. The #8 and #9 spot scarfing units also have an optional split unit capability whereby the scarfing coverage can be reduced to one-half of the full unit coverage. The SSU produces smooth, flat, fin-free cuts over a wide range of depths and can be used with a variety of fuel gases including natural gas, propane, methane, and purified coke oven gas. For maximum safety and freedom from flashbacks, the preheat gases are postmixed. These scarfing units offer the capability to make end starts, near-end starts, surface starts, and flying spot scarfing starts with virtually no starting gouge, and the intense preheat flames produced by this scarfing unit give it the ability to make starts in 5 to 30 seconds depending upon steel temperature, type of start, and steel condition.

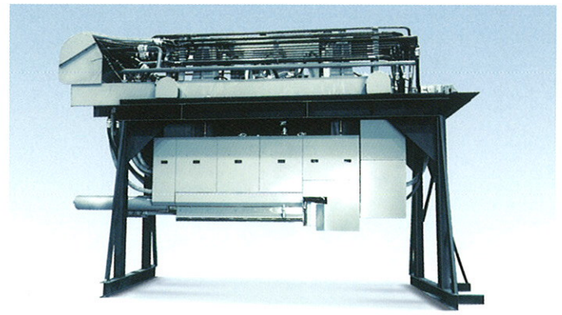
These SSU assemblies, and their component parts, are precision-built for quality and durability. Complete assemblies consist of a head, upper and lower preheat blocks, and a shoe that rides the steel while scarfing. All components are water-cooled.



CM-69S BAND-PASS SCARFING MACHINE.

The CM-69S is a rugged, overhead machine with individually selectable scarfing units for conditioning the top and one edge of cold, warm, or hot slabs from ambient to hot rolling temperature (70°F/21°C – 2000°F/1092°C). The CM-69S includes all the capabilities of the CM-98 in a two-sided machine.

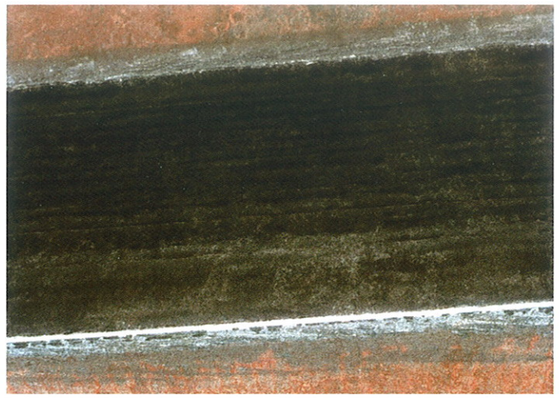
For high production, it is desirable to employ two machines in one of several possible arrangements. For lower tonnages, a single machine may be used. In either case, slabs must be turned over between passes if all four sides are to be scarfed.



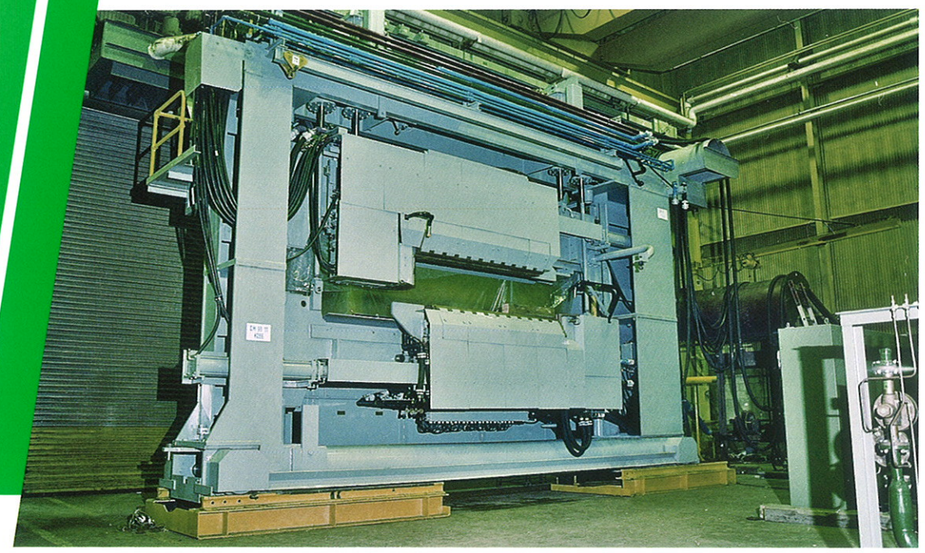
Machine Model	Thickness	Width
CM-69S-8	4-15/16 to 16-½ in (125 to 420 mm)	24-13/16 to 66 in (630 to 1680 mm)
CM-69S-9	4-15/16 to 16-½ in (125 to 420 mm)	24-13/16 to 74-¼ in (630 to 1890 mm)
CM-69S-10	4-15/16 to 16-½ in (125 to 420 mm)	33 to 82-½ in (840 to 2100 mm)
CM-69S-11	4-15/16 to 16-½ in (125 to 420 mm)	33 to 90-¾ in (840 to 2310 mm)
CM-69S-12	4-15/16 to 16-½ in (125 to 420 mm)	41-¼ to 99 in (1050 to 2520 mm)

CM-98 BAND-PASS SCARFING MACHINE.

CM-98 can scarf all four sides of continuous-cast or rolled slabs or selectively scarf in any combination of 8 1/4 in (210 mm) increments up to the full capacity of the machine. The machine is intended to scarf cold, warm, or hot slabs from ambient to hot rolling temperature (70°F/21°C – 2000°F/1092°C). It is capable of making end starts from the leading edge on flat, square cut, continuous-cast slabs. Conventional or near-end starts in from the leading edge of unsheared, hot rolled slabs are also available. Scarfing units for the top, bottom and edge surfaces are individually selectable, producing either individual band passes or complete surface scarfing.



Machine Model	Thickness	Width
CM-98-8	4-15/16 to 16-½ in (125 to 420 mm)	24-13/16 to 66 in (630 to 1680 mm)
CM-98-9	4-15/16 to 16-½ in (125 to 420 mm)	24-13/16 to 74 ¼ in (630 to 1890 mm)
CM-98-10	4-15/16 to 16-½ in (125 to 420 mm)	33 to 82-½ in (840 to 2100 mm)
CM-98-11	4-15/16 to 16-½ in (125 to 420 mm)	33 to 90 ¾ in (840 to 2310 mm)
CM-98-12	4-15/16 to 16-½ in (125 to 420 mm)	41-¼ to 99 in (1050 to 2520 mm)



CM-88 SPOT SCARFING MACHINE.

The CM-88 is a single structure mounted on rails parallel to a row of stationary slabs. The scarfing travel motion is supplied through high performance, electronically controlled drive motors. The scarfing units can be mounted on three separate carriages: an edge unit carriage and two top unit carriages that can be mechanically latched together. For spot scarfing passes on the top surface, the two carriages are unlatched and indexed laterally across the slab. Process fluids are brought to the machine through specialized hose transport devices, and regulation equipment for these fluids is located on the machine proper.

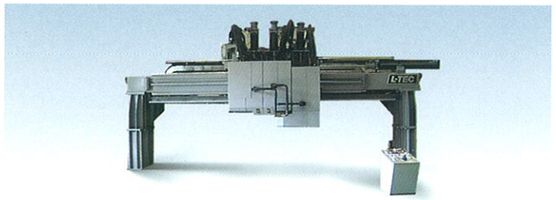
For maximum operator comfort and visibility, a fully-enclosed, climate-controlled operator's cab is supplied and fitted with special glass so that the operator can observe the scarfing reaction. Movement of the operator's cab is only available longitudinally in the direction of scarfing.

Machine Model	Thickness	Width
CM-88-1	4-15/16 to 16-½ in (125 to 420 mm)	4-15/16 to 8-¼ in (125 to 210 mm)
CM-88-2	4-15/16 to 16-½ in (125 to 420 mm)	4-15/16 to 16-½ in (125 to 420 mm)
CM-88-4	4-15/16 to 16-½ in (125 to 420 mm)	4-15/16 to 33 in (125 to 840 mm)

CM-99 SPOT SCARFING MACHINE.

The CM-99 is a rugged, overhead machine, with individually selectable scarfing units. The units are mounted on three separate carriages – an edge unit carriage and two top-unit carriages that can be mechanically latched together for band pass scarfing. For spot scarfing passes on the top surface, the two carriages are unlatched and are indexed laterally across the slab. The machine will scarf cold, warm, or hot slabs from ambient to hot rolling temperature (70°F/21°C to 2000°F/1092°C). The CM-99 includes all the capabilities of the CM-88 in a stationary machine.

For high production, it is desirable to employ two machines in one of several possible arrangements. For lower tonnages, a single machine may be used. In either case, slabs must be turned over between passes if all four sides are to be scarfed.



Machine Model	Scarfing Unit	Thickness	Width
CM-99-2-1	#8 SSU	4-15/16 to 8-¼ in (125 to 210 mm)	8-¼ to 16-½ in (210 to 420 mm)
CM-99-4-1	#8 SSU	4-15/16 to 8-¼ in (125 to 210 mm)	8-¼ to 33 in (210 to 840 mm)
CM-99-2-1	#9 SSU	4-15/16 to 10-5/8 in (125 to 270 mm)	10-5/8 to 21-¼ in (270 to 540 mm)
CM-99-4-1	#9 SSU	4-15/16 to 10-5/8 in (125 to 270 mm)	10-5/8 to 42-½ in (270 to 1080 mm)

SMOOTH SURFACE PREHEAT BLOCKS.

L-TEC keeps an edge on the growing demands of the steel industry in both production volume and quality by continuously making advances in research and development. The Smooth Surface Preheat Block (Patent no. 6.174.491) is one of our newest advances in scarfing development.

Scarfing oxygen exiting from the slot formed by the upper and lower preheat blocks must be uniform across the width and shielded against the aspiration of air into the stream to provide efficient, uniform, and smooth metal removal. The fuel gas that exits from the upper and lower preheat blocks performs this shielding function. The lower preheat block (LPB) fuel gas is the most critical to surface quality since it is the last gas to pass over the molten surface of the steel as scarfing progresses. Any discontinuities in the fuel gas stream from the LPB will cause a disruption in the oxygen stream, which in turn will cause ridges or irregularities on the scarfed surface.

In the standard LPB design, fuel gas exits from the end of the block. The gas from each port is immediately drawn against the oxygen stream exiting the slot, providing the shield that prevents the aspiration of air into the reaction. To maintain a continuous uninterrupted gas shield, it is critical that each port remains open throughout the scarfing cycle. If ports become plugged by slag, this causes a disruption in the shield gas and therefore in the oxygen stream, which in turn will produce irregularities on the surface of the steel.

In the Smooth Surface Lower Preheat Block (SS-LPB) design, the physical end of the block is kept some distance beyond the exit point of the fuel gas ports. This extended baffle creates a chamber between the block and the slot oxygen stream. As fuel gas is drawn from this chamber toward the steel surface, the oxygen compresses it against the end of the baffle. As a result, the gas shield is uniformly distributed across the width of the block. This design minimizes the effect of plugged gas ports on the surface quality, because uniform distribution of the gas is less dependent on flow from individual ports.

Benefits:

- **Very smooth surface finish**
- **Allows adjacent fuel gas ports** in the preheat block to be plugged without detrimental effect on the scarfed surface. (This should not postpone regular cleaning of scarfing units generally performed after every shift.)
- **Smooth Surface Preheat Block** can be retrofitted to fit any existing scarfing unit. If purchased as a retrofit, it is advisable that all the lower blocks are exchanged en masse, otherwise a mixed steel surface smoothness will result.

Steel slab surface scarfed with smooth surface scarfing units.

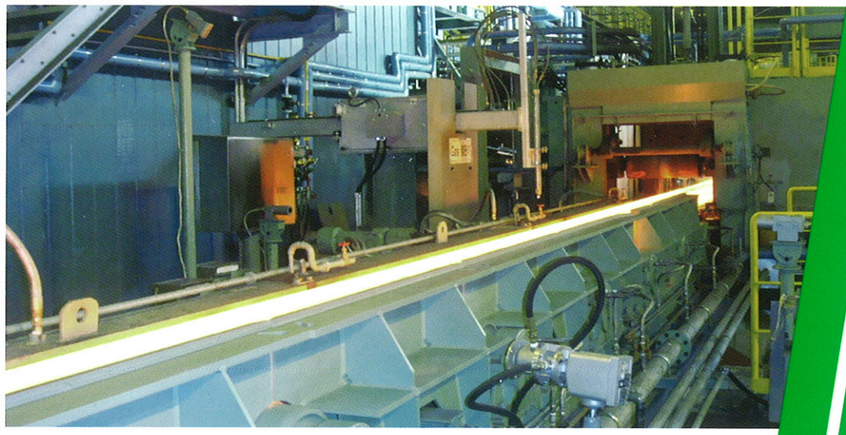
ELECTRONIC PROCESS CONTROL (EPC).

L-TEC's Electronic Process Control (EPC) System is one of the newest advances in scarfing development. A combination of gauges, valves, regulators, and transducers continuously monitor, regulate, and inform the operator of the flow of gases to the scarfing machine.

The pressure at the scarfing unit is the important variable. A pressure tap at the unit senses the pressure, which is conveyed via a signal hose to the P/E unit on the scarfing machine. The P/E unit converts the pneumatic pressure to an analog electrical signal that is input into the PLC controller. An analog signal is then output by the PLC to an E/P unit. This E/P unit converts the electrical signal to a relative pressure level. This output pressure is input to a P/P unit, which boosts the pressure signal by a preset ratio factor. The increased pressure signal produces sufficient pressure and capacity to provide the necessary pilot pressure to the gas regulator. This regulator provides the process supply to the scarfing units.

The PLC control logic provides several functions, two of which are important in the EPC system operation. The first function is logical in that the desired pressure operation is selected for specific time periods of the various operation sequences (e.g., scarf cycle, pre-heat, etc.). The second function serves as an EPC loop controller, whereby the resulting pressure at the unit is obtained and maintained in the required fashion. In the PLC program, the feedback (P/E measurement) is compared against the working pressure requirement, and correction to the analog output control is made. As a closed loop system, any changes in the steady state pressure by various disturbances can be corrected instantaneously.

SPECIALIZED MACHINES AND OTHER PRODUCTS.



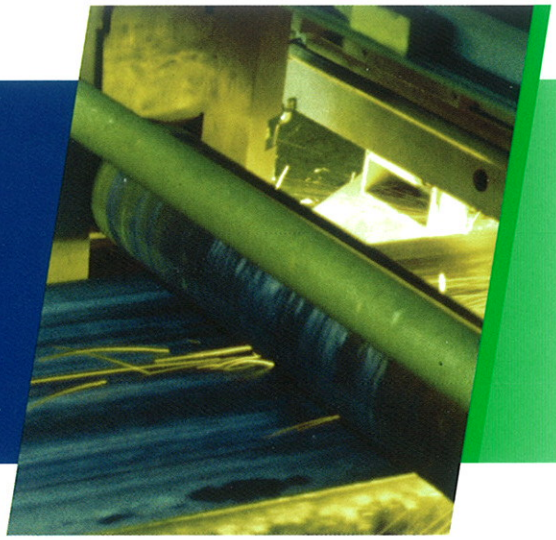
The features offered by the machines in this brochure are designed to meet practically every scarfing need. L-TEC, however, carefully analyzes the requirements of each customer and if those needs cannot be met by a standard machine, customized versions can be provided. Special features include the capability for extra depth scarfing (heavy removal) from selected areas of a slab during desurfacing; provision to choose to scarf only the top, bottom, or edges (selective scarfing) of a slab as it passes through a four-sided scarfing machine; and the capability for scarfing products such as beam blanks.

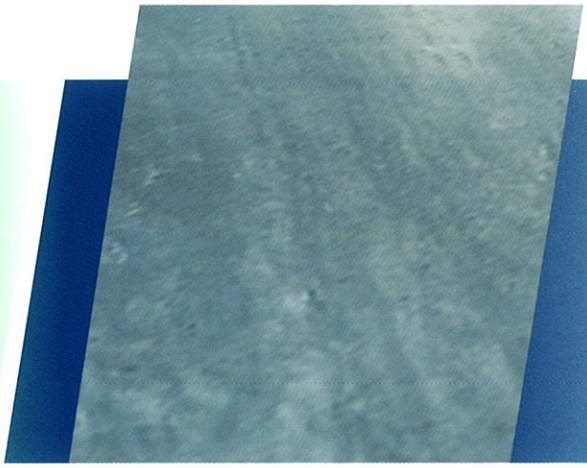
Other types of machines are available, such as striping machines to make a scarfing pass for quality inspection purposes, as well as machines for scarfing billets and blooms on the diamond. L-TEC can also provide machines for flame slitting or comer beveling such slabs.

L-TEC also offers a complete line of cutting machines, cutting torches and regulators, dross removal equipment, and other products to support the steel mill.

If you have a surface quality problem, contact L-TEC. It's likely that we have encountered and solved it before, or that we already have the problem under study.

L-TEC
STEEL INDUSTRY PRODUCTS





L-TEC Steel Industry Products – over 75 years and steel perfect.
Made in the USA.

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