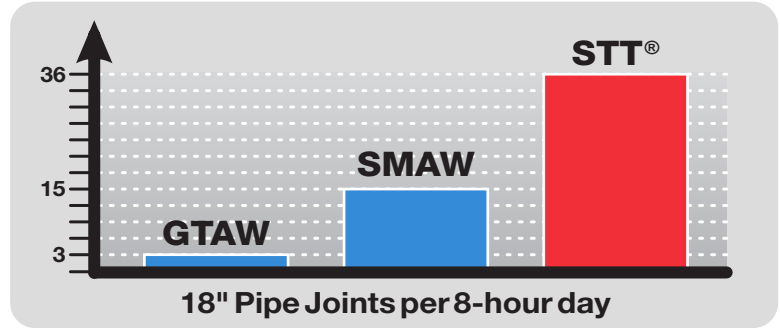


# STT<sup>®</sup> Pipe Root Pass Synergic Weld Process

**STT<sup>™</sup>** – Fill any open root, anywhere.

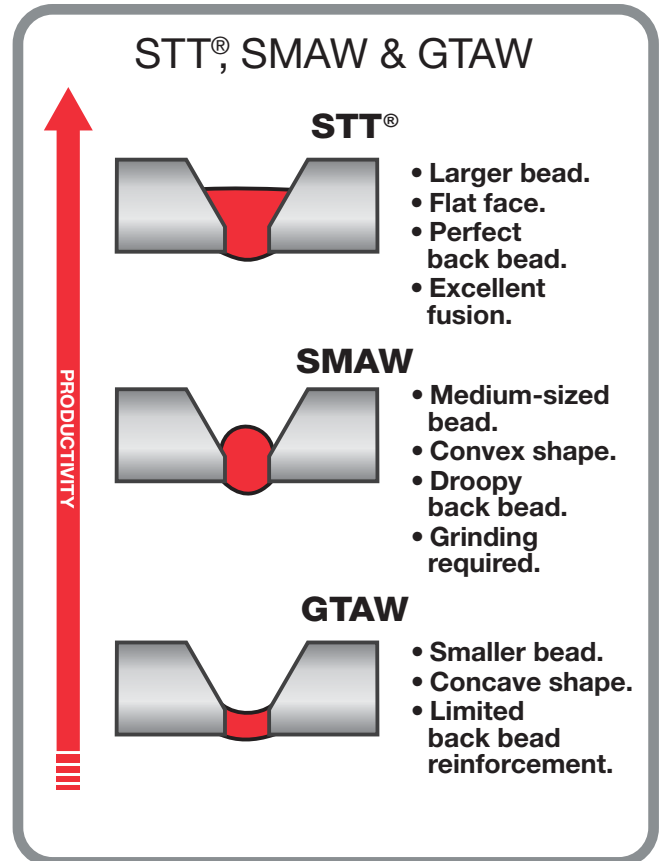
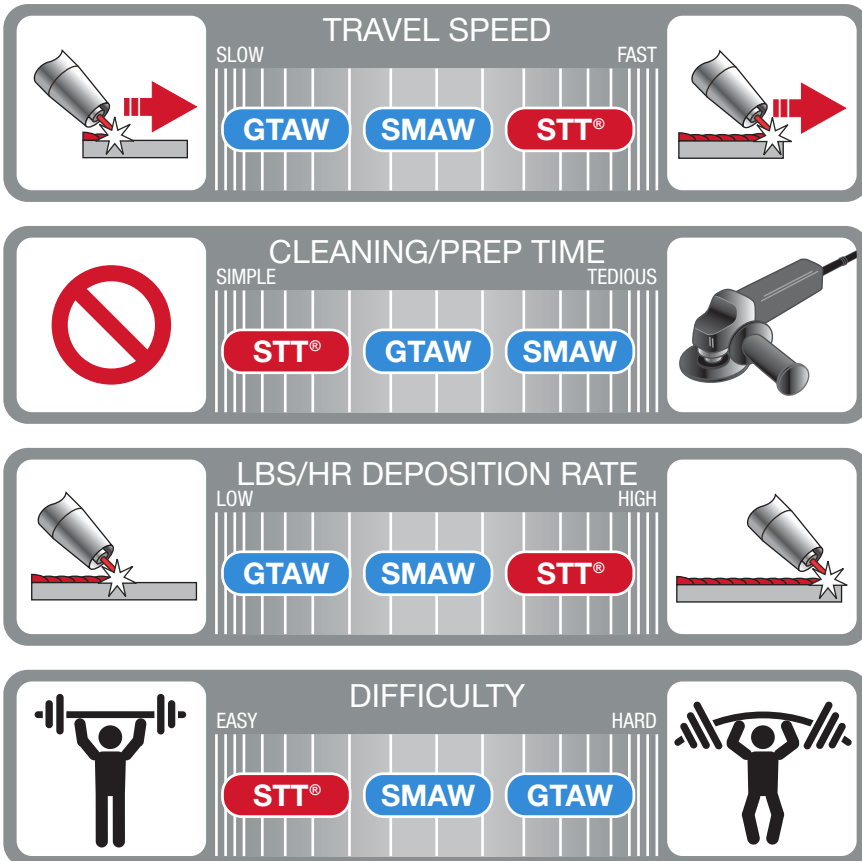
- 2 times faster than SMAW
- 4 times faster than GTAW
- Requires less operator skill
- Meets low Hydrogen requirements



The patented **STT<sup>®</sup>** (Surface Tension Transfer) is a modified GMAW short circuit welding process, designed for open root welding. This unique process simplifies open root welding, requiring less operator experience to implement. **STT<sup>®</sup>** is a proven pipeline process, produces excellent quality welds, and improves productivity over

more traditional SMAW & GTAW root welding methods. These results are due to the patented design of this process, eliminating common problems such as burn-through and lack of fusion commonly associated with standard short-circuit transfer.

## FEATURES



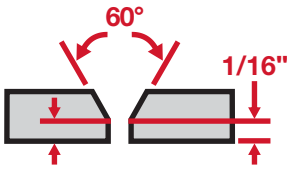
**LINCOLN<sup>®</sup>  
ELECTRIC**

The Performance You Need.  
The Quality You Expect.<sup>SM</sup>

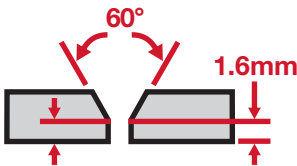
# Applications

## Steel Procedures

### English



### Metric



Trim and Ultimarc should be used at the nominal settings. Adjust to application settings.

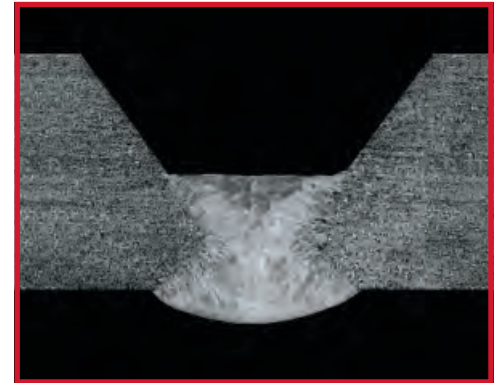
Wire	Gas	Position	Electrode	Shielding	Speed
* .035	100% CO2	3/8" - 1/2"	.08 - .100"	150 - 225 in./min	
	ARGON / MIX	3/8" - 1/2"	.100 - .125"	150 - 225 in./min	

Wire	Gas	Position	Electrode	Shielding	Speed
* .040	100% CO2	3/8" - 1/2"	.08 - .100"	140 - 200 in./min	
	ARGON / MIX	3/8" - 1/2"	.100 - .125"	140 - 225 in./min	

Wire	Gas	Position	Electrode	Shielding	Speed
* 1.0mm	100% CO2	10-13mm	2.0-2.5mm	3.4-4.6 m/min	
	ARGON / MIX	10-13mm	2.5-3.2mm	3.4-5.1 m/min	

Wire	Gas	Position	Electrode	Shielding	Speed
* .045	100% CO2	3/8" - 1/2"	.08 - .100"	150 - 225 in./min	
	ARGON / MIX	3/8" - 1/2"	.100 - .125"	150 - 225 in./min	

Wire	Gas	Position	Electrode	Shielding	Speed
* 1.2mm	100% CO2	10-13mm	2.0-2.5mm	2.8-3.8 m/min	
	ARGON / MIX	10-13mm	2.5-3.2mm	3-4 m/min	



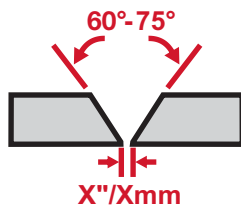
Typical STT Root Pass Macro.

\*See the STT™ weld process guide for: technical data, proper set-up, application settings and troubleshooting.

## Joint Preparation

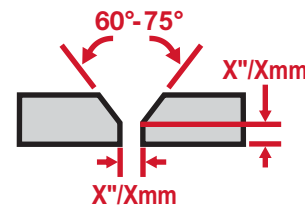
See Customer Assistance Policy and Disclaimer Notice.

### 1G – NO LAND (Knife Edge)



Gas	Position	Gap (Inches)	Gap (mm)	Land
100% CO2	1G	.080" - .100"	2.0 - 2.5	⊘
ARGON / MIX	1G	.100" - .125"	2.5 - 3.2	

### 1G, 2G, 5G, 6G – LAND



Gas	Position	Gap (Inches)	Gap (mm)	Land (Inches)	Land (mm)
100% CO2	1G	.100" - .125"	2.5 - 3.2	.060" - .125"	1.5 - 2.0
100% CO2	2G, 5G, 6G	.100" - .125"	3.2 - 4.0	.060" - .125"	1.5 - 2.0
ARGON / MIX	1G	.125" - .156"	3.2 - 4.0	.060" - .125"	1.5 - 2.0
ARGON / MIX	2G, 5G, 6G	.125" - .156"	3.2 - 4.0	.060" - .125"	1.5 - 2.0

## Recommended Equipment

### Power Source

Power Wave® S350, R350, S500 or R500 w/ Digital STT® Module or Advanced Module

### Wire Feeder

Power Feed® 84 or 25M

### Accessories

SuperArc® Wire  
SupraMig®  
Magnum® Pro Gun

### Customer Assistance Policy

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customer and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

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