TENSILEWELD
by WASHINGTON ALLOY CO.

The "SUPER BLUE" alloy is a problem solver!
When you're in a jam and need a quick reliable answer, reach for Tensileweld.
Tensileweld's tough matrix and unique formula give it a wide variety of applications, from pulling a broken bolt stud to welding high strength and high stress steels.

Pack Sizes
60 lb carton
10 lb packs
5 lb packs
1 lb tubes

Diameters
3/32, 1/8, 5/32, and 3/16"

Features:
High strength weld deposits.
Excellent crack resistance.
Easily machinable.
Smooth, finely rippled bead.
Crisp, easy slag removal.
Welds in all positions.

TENSILEWELD is great for dissimilar metals!
Also, many unknown metals, worn and fatigued metals, cast steels, tool & die steels, etc. can be easily welded and repaired with smooth running Tensileweld!

Washington Alloy products are manufactured, packaged and processed in strict conformance to an ISO 9001 Registered Quality Management System.

California:
8535 Utica Ave
Rancho Cucamonga, CA 91730
(800) 830-9033 T
(909) 291-4586 F

Texas:
4755 Alpine Drive #100A
Stafford, TX 77477
(877) 711-9274 T
(281) 313-6332 F

North Carolina:
7010-G Reames Rd
Charlotte, NC 28216
(888) 522-8296 T
(704) 598-6673 F
SUPER STRENGTH WELDING ELECTRODE
For Fabricating, Maintenance and Repair
AC/DC+

USA TENSILEWELD is a high strength, versatile welding electrode designed for applications on a variety of ferrous alloys, especially crack sensitive steels. TENSILEWELD is also typically used on T-1 Steel, Hy80 and Hy 100 steels, all grades of stainless steels, carbon, spring and case-hardened steels. TENSILEWELD can also be used to join any dissimilar combination of ferrous alloys as well as unknown or unidentified steels. TENSILEWELD can even be used to remove broken off bolt studs (procedure shown below), as well as broken off easy-outs and drill bits.

Note: TENSILEWELD is not designed to be used on aluminum, magnesium, titanium or other non-ferrous metals. Any attempt at welding such metals is at the sole responsibility of the user.

TYPICAL APPLICATIONS include pressure vessels, aircraft parts*, pits and cracks in tool steels, buttering work-stressed steels prior to joining or hardfacing, underlayment for hardfacing, cast steel repair, gears, shaft rebuilding. UNKNOWN STEELS, some cast iron repair**, etc.

* Any application in the aircraft industry will require special spec. certification. ** When welding cast irons to other steels, "peening" is recommended to relieve surface stress.

USA TENSILEWELD does NOT respond to heat treating

<table>
<thead>
<tr>
<th>Tensile Strength</th>
<th>Yield Strength</th>
<th>Elongation</th>
<th>Hardness</th>
</tr>
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<tbody>
<tr>
<td>up to 120,000 psi</td>
<td>up to 90,000 psi</td>
<td>up to 30%</td>
<td>200 Brinell, Rc up to 20</td>
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</tbody>
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RECOMMENDED AMPERAGE SETTINGS

<table>
<thead>
<tr>
<th>Size</th>
<th>Amperes</th>
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</thead>
<tbody>
<tr>
<td>3/32</td>
<td>40-90</td>
</tr>
<tr>
<td>1/8</td>
<td>75-125</td>
</tr>
<tr>
<td>5/32</td>
<td>100-150</td>
</tr>
<tr>
<td>3/16</td>
<td>140-240</td>
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PROCEDURES FOR REMOVING A BROKEN STUD OR BOLT

USA TENSILEWELD has a special flux coating that will, when used according to the procedure below, flow around the column of weld metal and act as a barrier between the threads and the weld metal, preventing the two from joining. Do not attempt this procedure with any other type of welding electrode or bare MIG or TIG wires.

1. A broken off stud in an engine block or other solid housing, can frequently be removed in a fraction of the time it would take with a stud remover. USA TENSILEWELD can get you back in business in just minutes with no drilling, tapping or need of specialized tools. Just follow these simple steps:

   Step 1. Select a nut that has a hole in it slightly larger than the column of weld metal, but preferably not as large as the bolt hole. Carefully center the nut over the column crown and lay it flat on the surface of the block.

   IMPORTANT TIP: If you are in a situation where two pieces of metal were held together by the broken bolt, such as an exhaust manifold flange to an engine block, and both sections are still in place, you MUST use a section of copper tubing slightly smaller than the hole. Inserted all the way into the hole, then follow the above procedures. Gaps between the two metals will allow the slag to leak out from the bolt cavity, causing the weld column to lose its flux barrier and weld itself to the threads.

   Step 2. Before beginning your weld, use a test plate to set your amperage by making a small test weld that will burn smoothly with a paired arc. Carefully insert USA TENSILEWELD into the bolt hole paying special attention not to touch the sides of the hole with the electrode.

   Step 3. Strike your arc dead center on the stud, keeping a tight arc, holding the electrode as steady as possible.

   Step 4. Once the column is level with the top of the nut, begin oscillating the TENSILEWELD electrode until you weld the nut to the column of weld metal.

   Step 5. Now that you are done, allow the weld to cool and use a wrench to remove the stud with a rapid back and forth motion to break up the slag and loosen the stud.

WARNING: PROTECT yourself and others. READ AND UNDERSTAND this information. FUMES AND GASES can be hazardous to your health. ARC RAYS can injure eyes and burn skin. ELECTRIC SHOCK can KILL. * Before use, read and understand manufacturer's instructions, Material Safety Data Sheets (MSDS) and your employer's safety practices. * Keep your head out of fumes. * Use enough ventilation and/or exhaust at the arc to keep fumes and gases from your breathing zone and the general area. * Wear correct eye, ear and body protection. * Do not touch live electrical parts. * Keep out of reach of those unable or unwilling to use safe handling practices. * See American National Standard ANSI 249.1, "Safety in Welding, Cutting and Allied Processes" published by the American Welding Society, 580 NW LeJeune Rd, Miami, FL 33126; CISHA "Safety and Health Standards", available from the U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954.

CALIFORNIA PROP. 65 WARNING: This product may contain chemicals known to the state of California to cause cancer, birth defects and reproductive harm.