

# ULTIMA™ 601 PIPE

## 600BHN Abrasion Resistant, Hardened I.D. Wear Pipe

**Ultima 601 Pipe** is the ideal abrasion resistant pipe for applications where extreme wear and erosion are factors. **Ultima 601 Pipe** is versatile. We can supply long lengths of up to 40 feet, elbows, custom sweeps and cut-to-length spools. It is excellent in service temperature to 450°F.

With its **600BHN I.D. and 250BHN O.D.** hardened surfaces, **Ultima 601 Pipe** will take the abrasion and wear that glass, fly ash, sand, coke and coal handling cause. It is ideal for slurry piping systems.

### Typical Applications

- Bottom Ash
- Coal
- Coke
- Fly Ash
- Glass
- Sand
- Stone
- Wood Chips

### Available Sizes

Nominal Sizes Available	All	O.D.
3" SCH 80	.300	3.50
4" SCH 80	.337	4.50
5" SCH 80	.375	5.583
6" SCH 80	.432	6.625
8" SCH 80	.500	8.625
10" XH*	.500	10.75
12" XH*	.500	12.75
14" XH*	.500	14.00
16" XH*	.500	16.00
18" XH*	.375	18.00
20" XH*	.375	20.00
22" XH*	.375	22.00
24" XH*	.438	24.00
6" SCH 80	.280	6.560
8" SCH 80	.322	8.644
10" SCH 80	.365	10.730
12" SCH 80	.375	12.750
14" SCH 80	.375	14.00

**Note:** Standard wall roughly conforms to Schedule 40. Extra Heavy Wall roughly conforms to Schedule 80.

**Caution: DO NOT CUT LENGTHWISE, DUE TO RETAINED STRESS.**



### Available Lengths

10 Ft Random Lengths  
20 Ft Random Lengths  
Custom Cut-To-Lengths  
Longer Lengths Up To 40 Feet (Call for details)

End Preparation available for welding or for couplings. Sweeps and custom bends available with flanges welded in place. Elbows and fittings available with either a hardened I.D. or **Rhino Klad™** I.D. coating.

### U.T. Inspection For Wear Patterns

Since this is a steel pipe product, you may use ultrasonic inspection to check for wear patterns. Simply rotate the pipe a quarter turn to restart with maximum wall thickness. No need to tear down the line to check the remaining wall thickness.

**Note:** Because of extreme I.D. hardness, our customers often overlook the O.D. hardness. Even though it provides ductile shock resistance for the pipe, it is still **WEAR PLATE HARD**. You will find that it provides excellent wear resistance for applications involving wear on the O.D.

**(Past Protected Trade Name of Ludlow Steel Co.  
– Max-Wear™ Pipe)**

# ULTIMA™ 601 PIPE

## 600BHN Abrasion Resistant, Hardened I.D. Wear Pipe

### Welding I.D. Hardened Wear Pipe

Our **Ultima 601** induction hardened wear pipe is manufactured utilizing specialized thermal techniques that develop carbide hard inside diameters while maintaining ductile hardened outside diameters for toughness. Unregulated intense heat (from cutting, or welding operations) may “draw back” the hardness of the I.D., resulting in diminished resistance to abrasive wear. Please exercise all caution to minimize heat transferred to the inside of the diameter of the pipe.

**Joint Prep:** Remove all slag and discolored material after cutting, i.e. follow standard welding procedures for preparing clean smooth joints free of contaminants. Bring parts to contact, allow 3/16” max. root opening. For spaces greater than 1/16” increase leg of fillet weld by the amount of the opening.

**Pre-Heat / Inter-pass Temperature:** If any of the parts are colder than room temperature (70°F), preheat weld zone and 6” of adjacent material to 100°F for sections heavier than 1” thick cross-section call for guidelines. Do not exceed 450°F inter-pass temperature.

**Electrodes:** E7018 electrode, (1/8”, or 3.18mm). Smaller diameters may be used. Follow *Standard Low Hydrogen Method*. Utilize sound welding practices and only use experience welders familiar with welding pipe and related products.

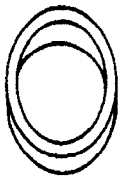
**General Guidelines:** Place welds to the outside of the pipe wall O.D. Avoid heat buildup on the I.D. Maintain smallest practical weld bead. The bead length should not exceed 5” to 6”. Allow the pipe to cool before applying additional beads. Use stringer bead and avoid a weave pattern. Use multiple passes (5 to 6 passes for 3/8” fillet welds - 10 to 12 passes for 1/2” fillet welds).

### Avoid Butt-Weld Construction

**Caution:** Induction hardened pipe contains retained internal stresses. Never cut this product lengthwise, as serious injury or property damage might result. Employ all standard guidelines appropriate to welding hardened alloy materials. Always use experienced welders.

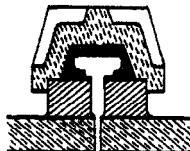
#### **Weld Ring**

Added at the factory on request. Prepares ends for various coupling methods



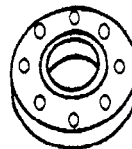
#### **Victaulic® Coupling**

Coupling applied over a weld ring.



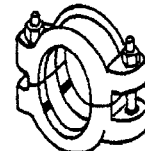
#### **Slip On Flange**

Prepares ends for various coupling methods.



#### **Roustabout Coupling**

A well proven site applied temporary coupling arrangement.



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