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GLOSSARY
by JORGENSON METAL FORMING & ROLLING INC.

Angle bending – A metal forming process used to form angle iron to a specific degree or angle.
Generally angle iron bending differs from angle iron rolling in that it is more concerned with forming the angle iron to a specific angle or degree, rather than a curve or radius.
Angle iron bending can sometimes be used as another word for angle iron rolling. Both refer to the metal forming processes in which angle irons are formed to a specific degree, radius or curve.

Angle rolling – A metal forming process used to form angle iron into curves and or radiuses.

- Angle rolling may be used to form or bend Angle iron into curves at specific radiuses, to form arcs and or rings.
- Angle rolling can be done with the leg in, which is often times referred to as rolling the “hard-way”.
- Angle rolling can also be done with the leg out, which is commonly referred to as rolling the “easy-way”.
- Angle rolling may also be done with both legs in, and angle rolling may also be done with both legs out.
- Angle Rolling can be done on unequal leg angle iron as well. The end user should specify what leg needs to be in or out after rolling.

Angle rolling leg-in – A metal forming process used to form angle iron into curves and or radiuses.

- Angle rolling may be used to form or bend Angle iron into curves at specific radiuses, to form arcs and or rings.
- Angle rolling can be done with the leg in which is often times referred to as rolling the “hard-way”.
- Angle rolling leg-out – A metal forming process used to form angle iron into curves and or radiuses.
- Angle rolling may be used to form or bend Angle iron into curves at specific radiuses, to form arcs and or rings.
- Angle rolling can be done with the leg out which is commonly referred to as rolling the “easy-way”.

Angle rolling legs-out – A metal forming process used to form angle iron into curves and or radiuses.

- Angle rolling may be used to form or bend Angle iron into curves at specific radiuses, to form arcs and or rings.
- Angle rolling can be done with both legs out.
- Angle rolling legs-in – A metal forming process used to form angle iron into curves and or radiuses.
- Angle rolling may be used to form or bend Angle iron into curves at specific radiuses, to form arcs and or rings.
- Angle rolling can be done with both legs in.

Arc – The curved portion of the rolling or bending of materials such as pipe, tube, beam and channel.

Arc length – The length of the curved portion of the rolling or bending of materials such as angle, beam, square and rectangular tube

Architecturally exposed – Refers to when the processed material is going to visible or exposed in the structure. Sometimes architecturally exposed can mean that it will be painted, coated or plated, but still visible.

Architecturally non-exposed – Refers to when the processed material is not going to be visible or exposed in the structure.
Sometimes architecturally non-exposed can mean that it will be used as a support or brace that is covered or not visible

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Beam bending – A metal forming process used to form metal beam to a specific degree or angle.
Generally beam bending differs from beam rolling in that it is more concerned with forming the beam to a specific angle or degree, rather than a curve or radius.
Beam bending can sometimes be used as another word for beam rolling. Both refer to the metal forming processes in which beams are formed to a specific degree, radius or curve

Beam rolling – A metal forming process used to form metal beam into curves and or radiuses.

- Beam rolling may be used to form or bend metal beam into curves at specific radiuses, to form arcs and or rings.
- Beam rolling can be done with the flanges facing horizontally, which is often times referred to as beam rolling the “easy-way”.
- Beam rolling can also be done with the flanges pointed up or down, this is generally referred to as beam rolling the “hard-way on edge”.

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Beam rolling easy-way – A metal forming process used to form metal beam into curves and or radiuses.

- Beam rolling may be used to form or bend metal beam into curves at specific radiuses, to form arcs and or rings.
- Beam rolling can be done with the flanges facing horizontally, which is often times referred to as beam rolling the "easy-way"

Beam rolling hard-way – A metal forming process used to form metal beam into curves and or radiuses.

- Beam rolling may be used to form or bend metal beam into curves at specific radiuses, to form arcs and or rings.
- Beam rolling can be done with the flanges pointed up or down, this is generally referred to as beam rolling the "hard-way on edge".

Bending – A metal forming process used to form metal sheets and plates, as well as metal structural shapes, to a specific degree or angle.

- Bending is sometimes used as another word for rolling. Both refer to the metal forming processes in which materials such as sheet metal, plates, and structural shapes are formed to a specific curve, radius, degree or angle.
- Bending of metal sheets and plates can be used to form custom shapes such as formed channels, angles, and or Z-sections.
- Bending may be used to form tubes and or pipes to specific degrees or angles.

Bend radius – The radius of the arc normally taken from the centerline of the rolled or bent material such as plate, flat bar, round bar, channel, beam and tube.

Bevel – A type of end preparation done to rolled or bent pipe and tube

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Centerline radius – the distance, in inches, from the center of the pipe rolling or tube rolling bend to the center of the radius.

Channel bending – A metal forming process used to form metal channel to a specific degree or angle.
Generally channel bending differs from channel rolling in that it is more concerned with forming the channel to a specific angle or degree, rather than a curve or radius.
Channel bending can sometimes be used as another word for channel rolling. Both refer to the metal forming processes in which channels are formed to a specific degree, radius or curve.

Channel rolling – A metal forming process used to form metal channel into curves and or radiuses.

- Channel rolling may be used to form or bend metal channels into curves at specific radiuses, to form arcs and or rings.
- Channel rolling can be done with the flanges pointed in, which is often times referred to as channel rolling the "easy-way flanges in".
- Channel rolling can also be done with the flanges pointed out, which is generally referred to as channel rolling the "easy-way flanges out".
- Channel rolling can also be done with the flanges pointed up or down, this is generally referred to as channel rolling the "hard-way on edge".

Channel rolling hard-way – A metal forming process used to form metal channel into curves and or radiuses.

- Channel rolling may be used to form or bend metal channels into curves at specific radiuses, to form arcs and or rings.
- Channel rolling can also be done with the flanges pointed up or down, this is generally referred to as channel rolling the "hard-way on edge"

Channel rolling legs-in – A metal forming process used to form metal channel into curves and or radiuses.

- Channel rolling may be used to form or bend metal channels into curves at specific radiuses, to form arcs and or rings.
- Channel rolling can be done with the flanges pointed in, which is often times referred to as channel rolling the "easy-way flanges in".

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Channel rolling legs-out – A metal forming process used to form metal channel into curves and or radiuses.
- Channel rolling may be used to form or bend metal channels into curves at specific radiuses, to form arcs and or rings.
- Channel rolling can be done with the flanges pointed out, which is generally referred to as channel rolling the "easy-way flanges out".

Degree – Then angle in degrees to which the material such as tube rolling, pipe rolling, channel rolling or beam rolling is bent.

I.D. – The inside diameter of the tube or pipe that is going to be rolled or bent

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Minimum Tangent – The minimum amount of straight section required for pipe rolling, tube rolling, beam rolling and channel rolling.

O.D. – The outside diameter of the tube or pipe that is going to be rolled or bent.

Ovality – The controllable amount of distortion in pipe from its original shape during the rolling and bending process.

Pipe bending – A metal forming process used to form pipes to a specific degree or angle.
Generally pipe bending differs from pipe rolling in that it is more concerned with forming the square or rectangular tube to a specific angle or degree, rather than a curve or radius.

- Pipe bending is more commonly used to form a smaller, tighter radius that causes a more defined turn like that in an elbow.
- Pipe bending can sometimes used as another word for pipe rolling. Both refer to the metal forming processes in which pipes are formed to be used as arcs, curves, or Z-sections.

Pipe rolling – Forming of pipes into arcs and curves at specific radiuses using a metal rolling process. Pipe rolling generally differs from Pipe bending in that the curves are more gradual and form larger arcs and or rings. Pipe bending is more commonly used to form a smaller tighter radius that causes a more defined turn like that in an elbow.

Plate bending – A metal forming process used to form metal plates to a specific degree or angle.
Generally plate bending differs from plate rolling in that it is more concerned with forming the metal plate to a specific angle or degree, rather than a curve or radius.

- Plate bending is more commonly used to form a smaller, tighter radius that causes a more defined turn like that in an elbow.
- Plate bending can sometimes be used as another word for plate rolling. Both refer to the metal forming processes in which plates are formed to be used as arcs, curves, or Z-section

Plate rolling – A metal forming process that takes metal plates and forms them to a specific curve or radius.
- Rolling of metal plates can be used to form cylinders, shells, tanks, and cones.
- Plate rolling generally differs from plate bending in that the curves are more gradual and are more concerned with a curve or radius, rather than an angle or degree.

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Press brake bending – A metal forming process using a press brake to form metal sheets and or plates to a specific degree or angle. Bending of metal sheets and plates can be used to form custom shapes such as formed channels, angles, and or Z-sections. Press brake bending allows you to form custom shapes that might not be available as a standard shape and or size.

Rolling – A metal forming process used to form metal sheets and plates, as well as metal structural shapes, into curves or radiuses. Rolling of metal sheets and plates can be used to form cylinders, shells, tanks, and cones. Rolling may be used to form or bend structural shapes into curves at specific radiuses to form arcs and or rings. Angle rolling, channel rolling, beam rolling, tube rolling, pipe rolling, are all examples of structural shape rolling.

Roll past – A small amount of arc bent beyond the specified degree made during the rolling and bending process.

Rough cut – A rough end cut that is not intended to have any specified shape.

Square cut – A cut end that is specified as being square to the arc after the rolling and bending process

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Tangent – The straight section of the rolled material on either side of the tube rolling, pipe rolling, and channel rolling or beam rolling.

Tangent point – The beginning or ending point of the bent section in angle rolling, tube rolling, pipe rolling, flat bar rolling or round bar rolling

Tube bending – A metal forming process used to form square or rectangular tubes to a specific degree or angle.
Generally tube bending differs from tube rolling in that it is more concerned with forming the square or rectangular tube to a specific angle or degree, rather than a curve or radius.

- Tube bending is more commonly used to form a smaller, tighter radius that causes a more defined turn like that in an elbow.
- Tube bending can sometimes used as another word for tube rolling. Both refer to the metal forming processes in which square or rectangular tubes are formed to be used as arcs, curves, or Z-sections.

Tube rolling - Forming of square and rectangular tubes into arcs and curves at specific radiuses using a metal rolling process.
Tube rolling generally differs from Tube bending in that the curves are more gradual and form larger arcs and or rings.
Tube bending is more commonly used to form a smaller, tighter radius that causes a more defined turn like that in an elbow.

Wall thickness – The thickness, in inches, of the walls of the material such as pipe rolling and pipe bending or tube rolling and tube bending.

Disclaimer: The terms and or explanations given in the above examples may or may not represent the exact definition. They are explanations for terms that are commonly used in our industry and are intended only for minor educational purpose so that our customers may better communicate with us when inquiring about our capabilities and processes. These definitions have been sharpened after many years of questions and explanations with our customers. We are not suggesting in any way that these definitions should be used for any technical application.