

喷砂前钢结构处理
Steel Work Before Blasting

Protective Coatings

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砂轮机 Disc Grinder

- 用于锐边，焊缝等打磨；
- 这里有两种类型的砂轮：

右边: 用于较重较粗的打磨，
比如焊珠等

左边：用于光顺的打磨，除去氧化皮，涂料和锈



焊珠残留 Welding Beads Remaining

- 照片显示了支撑去除后留下的焊疤焊珠，或相似的现象，它们以前是焊在钢结构上面的。
- 在喷砂前，必须先行对此进行打磨光顺



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焊珠的打磨 Disc Grinding of Weld Beads

- 使用砂轮片对焊珠、锐边等进行打磨
- Grinding off weld beads, sharp edges etc. by means of a disc grinder.

- 某些砂轮能够减少火花
- Other types of discs are available. Some of them will reduce the amount of sparks.



打磨完后的钢板板表面
Steel Substrate after Disc Grinding

- 打磨完后的钢板表面已经除去焊珠，显得非常光顺

- Grinded surface
- Weld beads etc has been removed to form a smooth surface



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装配前的钢板
Steel Plate Prior to Assembly

- 切割车间内的钢板，
- 在这个阶段，是对锐边、人孔和切口进行打磨的最好时机
- 此时有利于工作的进行
- 可以很好的照明条件

- The plate is in cut shop
- At this stage it is beneficial to think about grinding of sharp edges, manholes, notches etc
- Easy to access
- Good lighting conditions



表面处理前的构件
Construction Prior to Pre-treatment

- 这是一个舱内构件
- 存在着锐边和粗糙的焊缝
- 在表面处理前，这些必须进行打磨

- Constructions inside a tank
- Sharp edges and rough welds etc.
- Must be grinded before surface preparation



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Disc Grinding of a Construction

- 锐边的打磨
- Grinding of sharp edges of a support

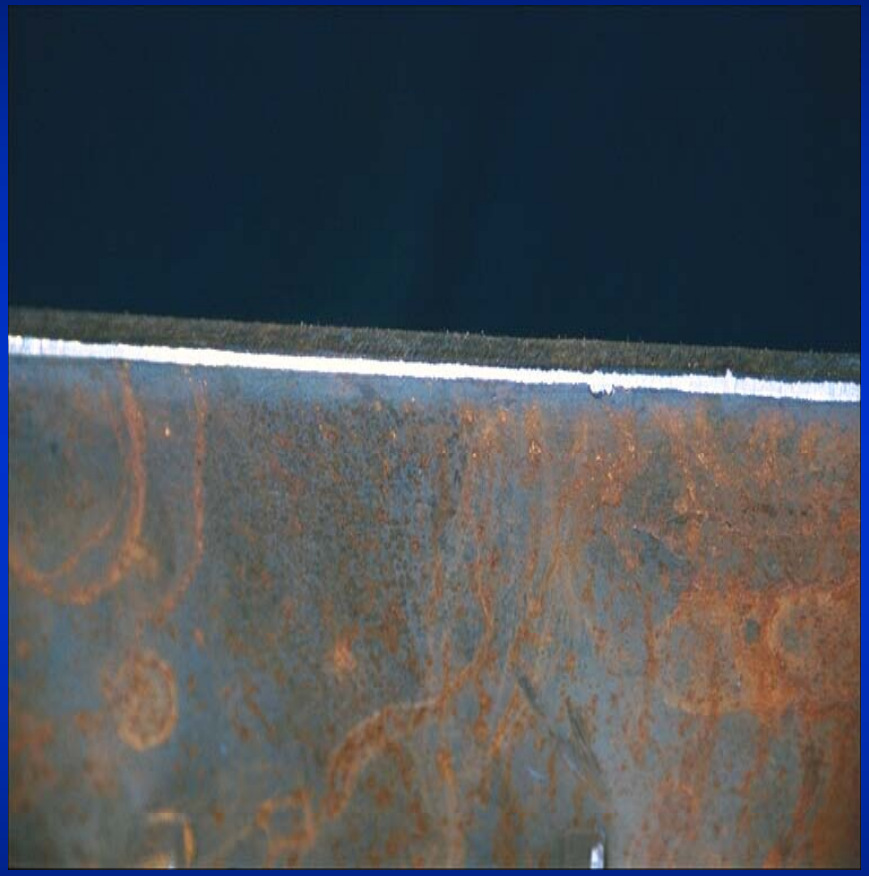


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Rounded Edge

- 锐边只有打磨圆滑后
- 才能保证边缘有足够的漆膜厚度



- Edge has been rounded
- Will ensure a sufficient paint film even at the edge

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Sharp Edge and Weld Flux

- Construction with sharp edge, weld flux and weld beads. (Weld beads due to lightning of the weld sticks)
- Pre-blasting preparation to be carried out:
  - Round sharp edge
  - Remove weld flux and smoke with water
  - Grinding of weld bead



Welding Smoke is Water Soluble

- Welding smoke is water soluble and can only be removed by water
- Solvents will not remove the welding smoke completely
- If not removed, osmotic blistering may occur.



打磨过的边缘和焊缝 Grinded Edge and Weld

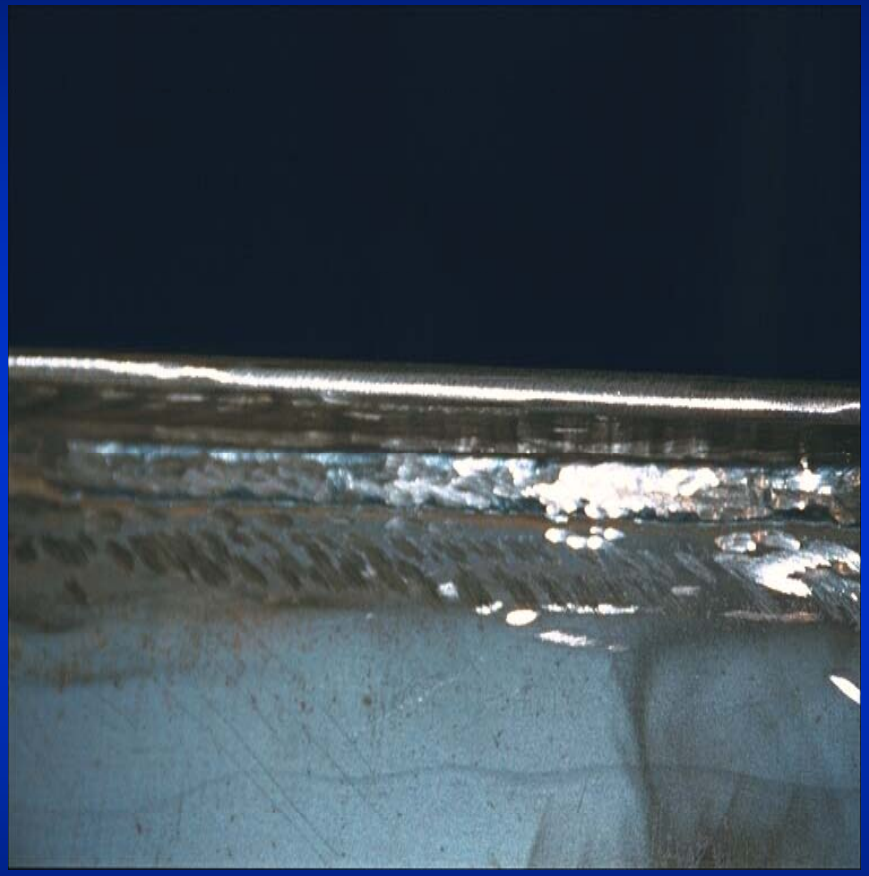
- 预喷砂后的钢结构
- Construction after pre-blasting preparation

Sharp edge has been rounded

-锐边已经被磨圆

Weld flux and smoke has been removed

焊渣和焊烟已经被清除



喷砂前的切口
Notch Prior to Pre-blasting Preparation

- 切口必须进行打磨
- 焊烟要清除
- 锐边要进行倒圆处理

- Construction with notch must be grinded
- Welding smoke has to be removed
- Sharp edges must be rounded



切口处旋转磨头打磨

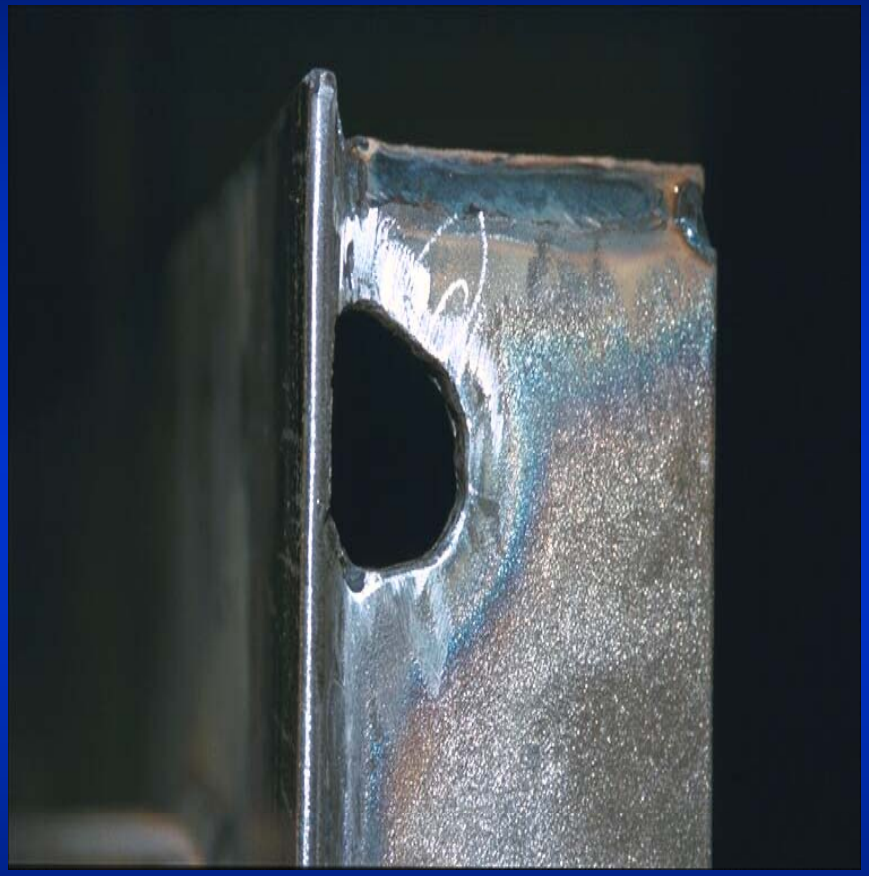
- 切口处使用旋转磨头打磨
- Grinding of notch with Power tool: Rotating file



打磨后的切口
Notch after Grinding

- 切口处经很好的打磨
- 使用了动力工具，旋转磨头

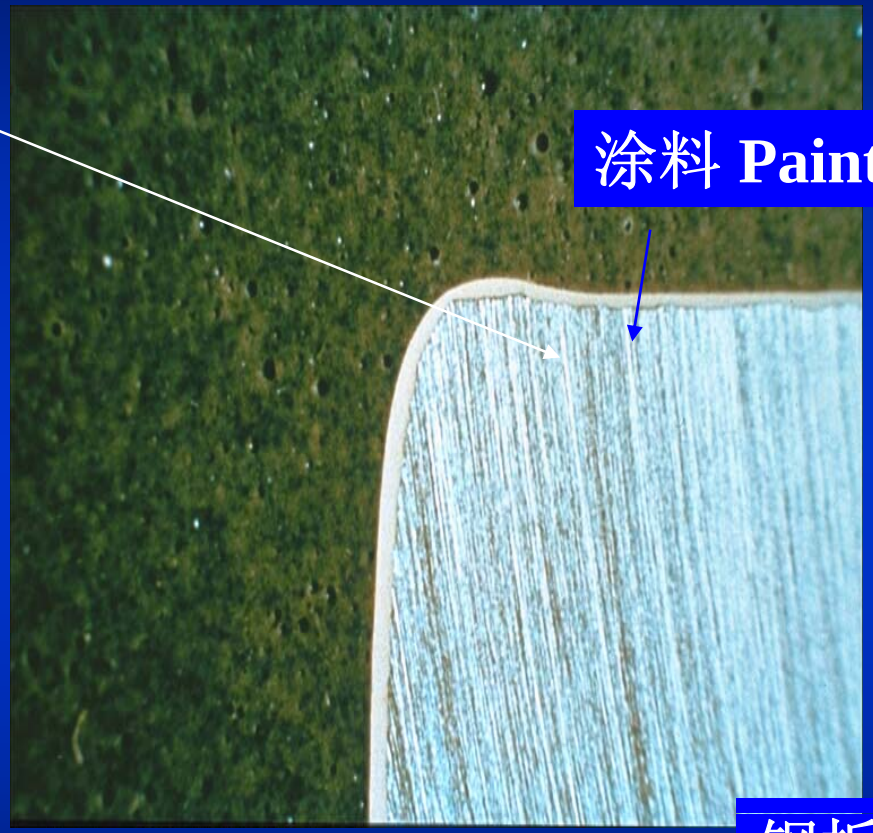
- Construction with well grinded notch
- Power tool, rotating file, has been used



打磨圆顺的边角横截面
Cross Section of Well Rounded Edge

- Cross section of painted steel edge
- Well rounded edge
- Paint applied by spray
- Forms even thickness around the edge

- 涂漆边缘的横截面
- 边角经过很好的打磨
- 喷涂后漆膜成形均匀良好



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锐边的横截面
Cross Section of Sharp Edge

- 涂漆后锐边的横截面
- 喷漆后边角漆膜成形较差

- Cross section of painted steel
- Sharp edge
- Paint applied with spray
- Forms inferior coating thickness around the edge



设备对钢板表面造成的油污
Equipment Contaminating the Surface

- 打磨机带来的油污
  - 润滑油的溢出
  - 工具贮存在有油的地方
  - 没有油封（压缩空气中带油）
- 油污在表面处理前必须先行去除

- Oil contamination from grinder
- Reasons may be:
  - Oil leaking out of equipment
  - Equipment has been stored with oil
  - Lack of oil trap. (Air from compressor contains oil)
- Must be removed prior to surface preparation



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