

Repairing a Broken Ear on Main Well Casting

In this case, the ear was cracked but the broken part was still attached, but barely so. I've actually had to fabricate the missing ear from scratch with similar results.







Relieve inside edge of crack for better weld penetration





Secure casting to weld fixture



Position and secure ear on fixture



All welded up. Not cosmetically what you want, but solid repair of affected area.



*Outside roughed in
with burr*

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*Smooth burr work with fine
cartridge roll*

Rough in inside with
burr





Smooth inside with cartridge roll



Looks pretty good. Over time, the worked area will oxidize, become closer to the color of the rest of the casting.

To achieve a consistent color and casting finish after such a repair, I've found vibratory media to achieve the best results. Unfortunately, it is nearly impossible to achieve the surface of the original casting as oxide layers are formed in the casting process and the other castings must be done to match. I don't care for most media blasting because it is more susceptible to staining.



Apply plastic masks to protect all machined surfaces and finish in vibratory media to blend repair with the rest of the casting surface.

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