

Metallurgy Lab: Rust Removal Comparison  
Chemical Removal

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Safety Requirements: Wear safety glasses or goggles. Wear nitrile gloves. Tie hair up and/or back. Shop attire.

Location: Open Air ventilation

**Watch:** this 27:09 video. [Olympics of Rust Removal #313 pt 2 VINEGAR tubalcain \(youtube.com\)](https://www.youtube.com/watch?v=313pt2VINEGAR)

Directions: Soak a rusted part in 75% acetic acid

Use commercial rust remover on another rusted part.

	Observations 75% Acetic Acid			Observations Commercial Rust Remover	
	15 minutes	30 minutes		15 minutes	30 minutes
Part #1			Part #1		

Compare the two different strategies for removing rust.

---

---

---

---

---

---

---

**Watch:** 14:24 video [Olympics of Rust Removal pt 1 #312 Electrolysis tubalcain \(youtube.com\)](https://www.youtube.com/watch?v=312)

Safety Requirements: Wear safety glasses or goggles. Wear nitrile gloves. Tie hair up and/or back. Shop attire.

Location: Open Air ventilation

**Directions:**

Fill standard 5-gallon bucket with approximately four gallons of water. Stir in approximately four tablespoons of washing soda (sodium carbonate.)

Suspend rusty part in fluid with room on the sides for the anode, cathode, and sacrificial part. Nothing should touch one another.

Suspend a sacrificial part on a side. Place the anode and cathode in the bucket.

Connect the positive clamp to the sacrificial part (or its wire or clamp). Connect the negative clamp to the rusty part (or it's wire).

Turn on power supply.

	Observation			
	Immediate Response	15 minutes	1 hour	2 hours
Rusty Part				
Sacrificial Part				

Turn off power supply. Disconnect anode and cathode.

Summarize your observations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Metallurgy Lab: Rust Removal

Name: \_\_\_\_\_

Mechanical Removal

Date: \_\_\_\_\_

Safety Requirements: Wear safety glasses or goggles. Wear nitrile gloves. Tie hair up and/or back. Shop attire.

Directions: Manually remove rust with a Scotch Bright pad, emery cloth, and a wire brush.

	1 minute
Scotch Bright	
Emery Cloth	
Wire Brush	

Summarize your observations: \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

---

---