

Procedure for Re-Tipping Roller (Rock) Bits

Stoody Alloy Recommended:

Acetylene Tube Borium "H"

Coverage:

One pound of Stoody Tube Borium "H" covers 9 to 10 square inches with a depth of 1/4". (Tube Borium "H" is available in tubes containing varying proportions of Borium. See your dealer.)

Remarks:

Service life more than justifies the modest cost of rebuilding.

Procedure:

PREPARATION: Submerge bit to be re-tipped in a suitable commercial cleaner or water in order to wash dirt off bit and out of bearings. Allow it to remain long enough to get thoroughly clean, then wire brush teeth to be rebuilt. Bearings should turn freely before retipping is started. If rollers are frozen they can be freed by sharply tapping the side of a tooth using copper hammer. Use a suitable jig so that bit may be suspended in water, to a level just below the tooth being worked on and well above the bearings. (Figure 1)

APPLICATION: Using the torch, heat tooth stub and blow off any surface scale present. After the worn tooth has reached a temperature at which it begins to sweat, the torch is played primarily on the hardfacing rod, melting it off as needed to build up worn tooth – the process is essentially a sweat-on rather than a simple welding job. With tooth in level position, apply Tube Borium "H" to the length of the tooth. Build up sufficiently in multiple passes to roughly form the desired tooth size. (Figure 3) Avoid overheating the base metal. Each tooth is built up and shaped before progressing to the next tooth. Buildup is flame shaped by applying heat to the sides and ends of the tooth and washing down the deposit smoothly. Leave a sharp cutting edge on the tooth. (Figure 4) The hard metal washed down the sides helps to bond the new tooth to the base metal and thus strengthens the tooth itself. Care should be exercised to avoid overheating the roughly shaped tooth, as excessive heat will make the deposit too fluid and result in a blunt cutting edge. During the shaping operation the rod, if held against the torch at the bend in the tip, is a valuable steadying aid.

FINISH: No finish necessary.

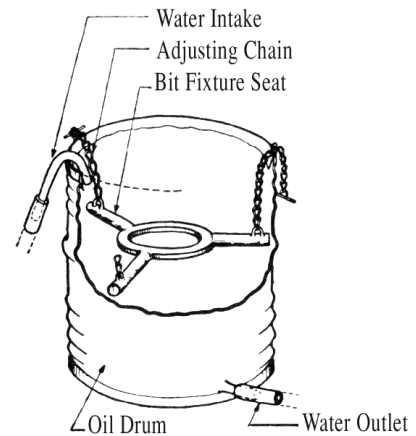


Figure 1

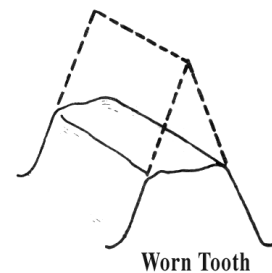


Figure 2

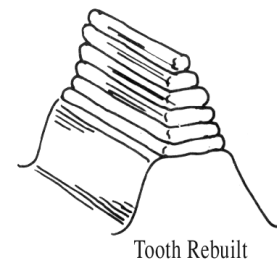


Figure 3

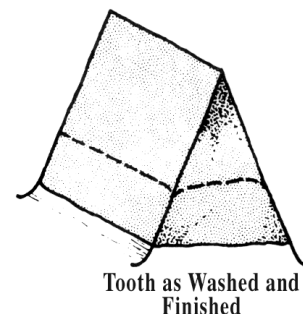


Figure 4

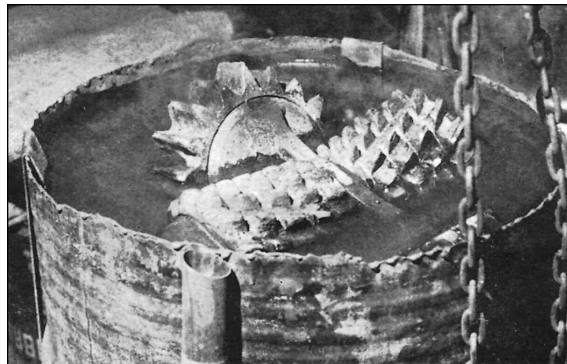
Procedure for Re-Tipping Roller (Rock) Bits



Fixture used for suspending bit at proper level in water while it is being welded.



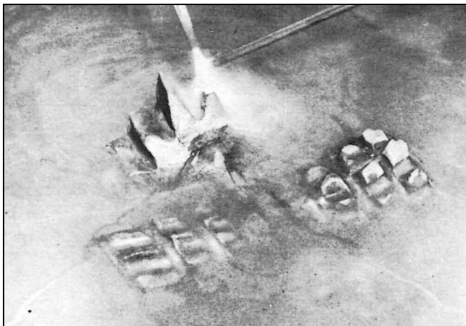
Built up tooth being sharpened by washing down Tube Borium "H" deposit with the flame.



Completed tooth can be seen at top of cutter on the left.



Rock bit being built up with Stoodly Tube Borium "H"; notice sharpness of completed teeth.



Extent of wear on tooth being worked is easily seen in the above photograph.



Rock bit on the left has been retipped with Stoodly Tube Borium "H". Bit on right is shown as worn.

U.S. Customer Care: 800-426-1888 / FAX 800-535-0557 • International Customer Care: 905-827-9777 / FAX 905-827-9797
www.stoody.com



A Global Cutting & Welding Market Leader™

THE AMERICAS

Denton, TX USA
 U.S. Customer Care
 Ph: (1) 800-426-1888
 Fax: (1) 800-535-0557

Miami, FL USA
 Sales Office, Latin America
 Ph: (1) 954-727-8371
 Fax: (1) 954-727-8376

West Lebanon, NH USA
 Customer Care, Plasma
 Ph: (1) 800-752-7621
 Fax: (1) 800-221-4401

Oakville, Ontario, Canada
 International Customer Care
 Ph: (1) 905-827-9777
 Fax: (1) 905-827-9797

Rio de Janeiro, Brazil
 Customer Care
 Ph: (55) 21-2485-8998
 Fax: (55) 21-2485-8866

EUROPE

Chorley, United Kingdom
 Customer Care
 Ph: (44) 1257-261755
 Fax: (44) 1257-224800

Milan, Italy
 Sales Office
 Ph: (39) 02-98-80320
 Fax: (39) 02-98-281773

ASIA/PACIFIC

Cikarang, Indonesia
 Customer Care
 Ph: 62 21+ 8983-0011 / 0012
 Fax: 62 21+ 893-6067

Osaka, Japan
 Sales Office
 Ph: 816-4809-8411
 Fax: 816-4809-8412

Melbourne, Australia
 Customer Care
 Ph: 1300-654-674
 Fax: 613- 9474-7391

International:
 Ph: 613+ 9474-7508
 Fax: 613+ 9474-7488

Rawang, Malaysia
 Customer Care
 Ph: 603+ 6092-2988
 Fax: 603+ 6092-1085

Shanghai, China
 Sales Office
 Ph: 86 21+ 6280-1273
 Fax: 86 21+ 3226-0955

Singapore
 Sales Office
 Ph: 65+ 6832-8066
 Fax: 65+ 6763-5812