

SUBJECT WASHING METAL STRIP

SUPERSEDED DATE

Initially used in producing 33-N-7S nickel strip and 33-S-41K acid etched steel strip.

1. EQUIPMENT

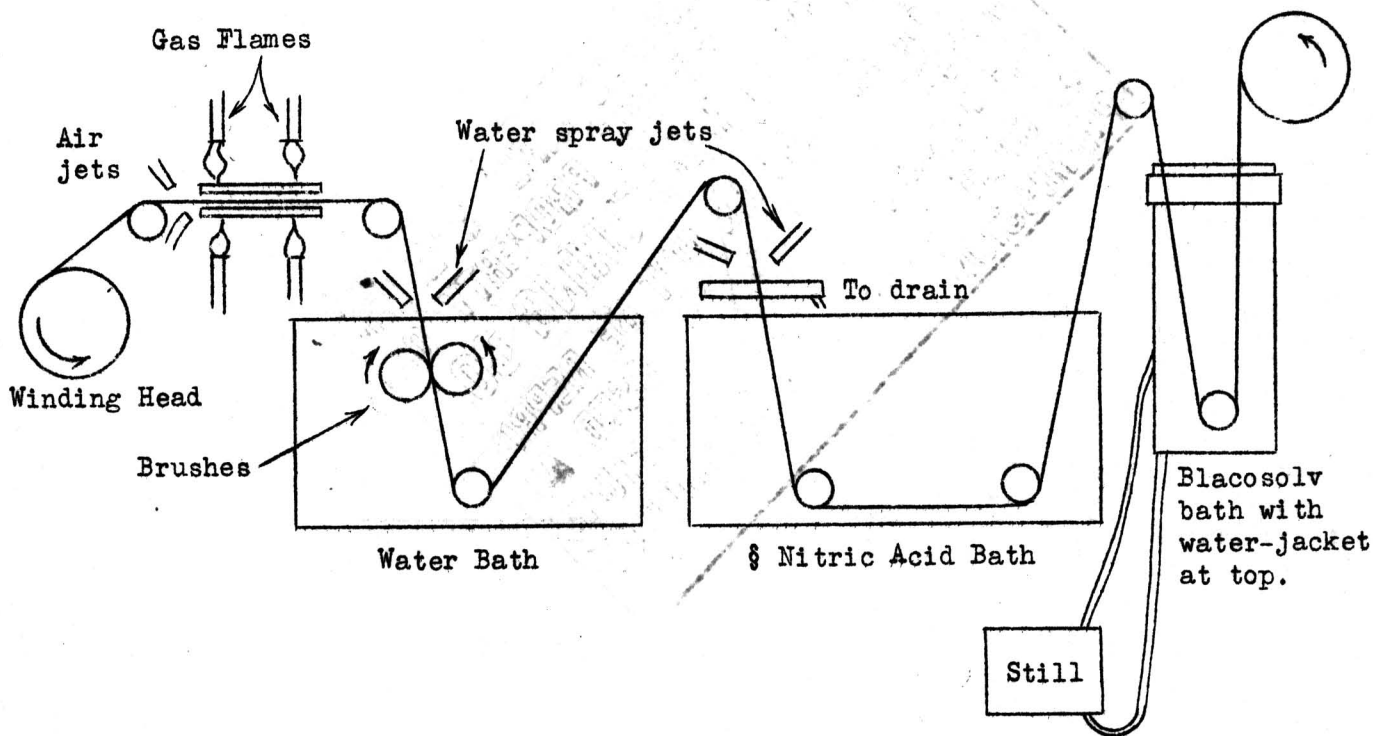
Acid etching unit S.O. 93-100 consisting of a Blacosolv washing tank with a Blakeslee still, acid etching tank, and a water rinsing tank.

2. MATERIAL

33-B-38 Blacosolv

Tap water

SCHEMATIC DIAGRAM



§ Nitric acid bath is by-passed in this process.

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3. PROCEDURE

The strip is unspooled into a degreaser containing Blacosolv, at the rate of 15 ft./min. Distilled Blacosolv from a still is fed into the degreaser so that it rinses the strip before leaving the degreasing operation. Blacosolv is continually being circulated from the degreaser into the still and back to the degreaser. The temperature of the Blacosolv in the still is 80°C. The still is steam heated. Pressure of the steam should be maintained at 15 psi. Too high a pressure will cause the level of the Blacosolv in the degreaser to rise and overflow. Too low a pressure will cause insufficient distillation of Blacosolv.

The strip is fed into a hot water tank after leaving the degreaser. The water temperature is approximately 55°C.

Leaving the tank, the strip travels vertically upward thru two nylon (or tampico) brushes, rotating against the strip. Above the brushes, a hot water spray is directed at the strip. The temperature of the hot water after being sprayed is 90°C. This spray feeds into hot water tank mentioned above.

The hot water rinse is needed to remove any Blacosolv polymers present on the strip.

The strip is then dried by passing between two plates which are heated from the outside by gas flames. High pressure air is passed between the plates on both sides of the strip to aid in drying the strip.

A coiling mechanism, with adjustable speed drive is used to re-spool the strip.

A check on the Blacosolv should be made daily when process is in operation and also when starting up. Limits for oil content and pH are:

Oil - - 5 mg/100 cc max.
pH - - 7 min.

When these limits are exceeded, Blacosolv-charge must be redistilled and oils and gums which have accumulated in still must be removed.

To check the quality of the washed strip, use the "water-break" method. Cover a small section of strip with water. If no oil is present, the water will adhere to the strip and cover it completely. The presence of oil will cause water to be repelled from that point.

Refer to 34-4-6 for information for checking of Blacosolv, safety precautions and cleaning of still.

STANDARDIZING SECTION
ENGINEERING DEPT.