



**TECHNICAL SPECIFICATION
FOR
VIBRO TUMBLING CHEMICALS**

**HY55397 REV 00
Page 1 OF 4**

1) SCOPE :

(a) The chemicals are used to improve the Surface finish of Steam Turbine Blades and Gas Turbine Blades from Surface Roughness (Ra) 1.6 - 2.0 microns to 0.40 microns or better. The polishing will be done by vibro-abrasion between turbine blade and suitable chips in an acid medium followed by cleaning in a neutralizing medium. The length of the blades to be accommodated shall be between 100 mm to 700 mm.

(b) PRESENT RANGE OF COMPONENTS:

- 1.) Min. Blades size: 50(L)x 12.5 (W) x 15(T) (26 gm), Blade Drawing:2-30315-00150 (T7-12.5)
- 2.) Max. Blade size: 700(L) x 68(W) x 75 (T) (10 Kg). Blade Drawing: 0-10307-62012 (Z-Type; 5 M2)
- 3.) Blade size: 190 (L) X 110 (W) X 40 (T) Drawing No : 0-35305-61013 enclosed for reference. GT Blades (FR-6 STG.3)

2) CHEMICALS:

The following chemicals are used.

- a).Megalloy Part A (REM)/GEDEB 810P(GALA) /FS-AAPP(FINSOL) or Equivalent
- b).Meagalloy Part B(REM)/GEDEB 811(GALA)/FS-BPP(FINSOL)orEquivalent
- c). FBC118(REM)/GEPOL 813P(GALA)/ FS33(FINSOL) or Equivalent

The above chemicals will not affect the mechanical / metallurgical properties of the blade material : X 20 Cr 13, X 22 Cr MoV121; C 450, 403 Cb.

**Date :
24.09.13**

**Prepared By :
K. SRINIVASA RAO**

**Approved By :
KSN MURTHY**



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PRESSURE GAUGES**

HY55397 REV 00

Page 2 OF 4

3) SPECIFICATIONS OF THE CHEMICALS for (2 a)

3.1. PHYSICAL PROPERTIES:

Appearance & Odour : Off white, powder. No odour

Physical State : Wet, Lumpy, powder.

Specific Gravity : Not Applicable.

Solubility in water (5% w/v) : Totally soluble in water, no residues.

Flash Point : Nil (Non-flammable).

pH (5% in water) : 1.5 to 2.0

3.2. CHEMICAL PROPERTIES:

Oxalic acid salts

Bisulphate salts

EDTA

E.O. based wetting agent

Polyethylene glycol

Note: This product does not contain chromium, heavy metals, silicones, nitrites, phenols or any other known hazardous compounds.

3.3 USAGE DATA : As per the polishing cycle suggested by the supplier.

3.4. SELF LIFE OF THE CHEMICAL:

Minimum of 24 months from date of supply

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**HY55397 REV 00
Page 3 OF 4**

4. HEALTH HAZARD:

Routes of exposure and effects:

Eyes : Will cause eye irritation.

Skin Contact : No effects expected (short term).

Inhalation : No irritation

Carcinogens/Toxicity : No known carcinogens; No heavy/toxic metals/
anions/cations.

4.1. EMERGENCY FIRST AID PROCEDURES:

Eyes : Immediately flush eyes with plenty of water. Get medical attention if irritation persists.

Ingestion : If swallowed, call a doctor immediately. Try to induce vomiting at the instructions of the doctor.

4.2. CONTROL & SAFETY MEASURES:

Respiratory : Good hygiene practices recommend that good ventilation is provided
Near point of use.

Gloves: Impervious gloves are recommended when handling this product.

Eye Protection: Safety glasses with side shield are recommended to avoid splash
into eyes.

Other: Eyewash facility should be immediately available.

4.3. FIRE & HAZARD DATA:


Stability : Stable under all conditions.

Condition to Avoid : None (Non-flammable, non-volatile, non-polymerizable).

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<p>5. <u>PROCESS:</u></p> <p>5.1. <u>Deburring cycle.</u></p> <ol style="list-style-type: none"> Add POWDERS , Chemical and Water into the Container in the proportions as recommended by the chemical supplier. Load Blades into the container. Start De burring cycle time for 360 min or as suggested by the supplier. After Deburring start washing cycle for 20 min followed by draing off 10 min or as Suggested by the supplier. <p>5.2. <u>Polishing Cycle:</u></p> <ol style="list-style-type: none"> Add chemical and water into the container in the proportions as recommended by the chemical supplier. Start Polishing cycle for 80 min or as suggested by the supplier. Drain on- wash on for 20 min or as suggested by the supplier. Reverse tumble the blades for 10 Sec or as suggested by the supplier. <p>Collect the blades Manually by lowering Flopper.</p>		
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