

Sub: Pre-Qualification criteria for Cylinder Jacket LH to DRG No. SB303-02-23 and Cylinder Jacket RH to DRG No. SB303-03-16.

Ref: Material Division/OTE letter no. EFA/DM/OTE/014, dated 07/06/23

With reference to above letter, the committee comprising of following members is formulated the pre-qualification criteria for Cylinder Jacket LH to DRG No. SB303-02-23 and Cylinder Jacket RH to DRG No. SB303-03-16 is given below:

Committee Members:

Shri. Anga Bhaskar, WM/QC(Assy)&R&D

Shri. K. Rambabu, WM/P

Shri. K. Kamaraj, JWM(SG)/FMS and

Shri. K. Ramesh Kumar, JWM(SG)/QC

1. The prospective vendors must be supplying or must have supplied large intricate aluminum engine Components to reputed engine manufactures.
2. Supplier should have experience of successfully manufacturing and supply of similar aluminium casting products to any government, PSU or reputed industries.
3. Supplier should accept and meet each clause of EFA drawings SB 303-02-23 & SB 303-03-16.
4. The supplier should allow witnessing of total manufacturing cycle at least one of castings by EFA representatives and entire process should be transparent.
5. The vendors, who are interested in supplying such components should have their own manufacturing facilities. The firm should have a large manufacturing base, adequate financial strength and well-documented quality system. The manufacturer should have adequate infrastructure like sufficient area of industrial shed, power backup, air compressors etc.
6. The casting manufacturer shall buy all input materials for liquid metal as well as for moulding and core making from reputed manufacturers only. Necessary material certificates for all input materials and additives should be available.
7. The vendors must have adequate trained, experienced and skilled manpower.
8. **THE FIRM SHOULD HAVE FOLLOWING FACILITIES:**
 - a) Aluminium melting furnace with adequate capacity.
 - b) Casting manufacturing facility.
 - c) Degassing plant.
 - d) Density meter and porosity detection systems to check the effect of the degasification.
 - e) Heat treatment facility (i.e. solutionising and ageing facilities). Pressure testing facilities or should submit declaration that the firm will create pressure testing facility after getting order.
 - f) Abrasive blasting / surface cleaning facilities.

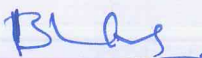
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- g) Fettling facilities like band saw, mechanical grinders etc.
- h) Argon TIG welding facility.
- i) HMC/VMC with axes strokes to accommodate component size 1250 x 300 x 300 mm (L X W X H) and weight 45 Kg.
- j) Expertise in designing of complex fixtures, special tools and gauges in house or tie up with for designing and manufacturing of complex fixtures, special tools.
- k) Facilities for deburring and checking the components.
- l) Facilities for fitting the studs with interference.
- m) Component washing facility like jet washing.
- n) Adequate material handling facilities like EOT cranes and forklifts etc.

9. QUALITY CONTROL REQUIREMENTS:

Testing facilities and test equipment and lab (preferably NABL accredited) should include following facilities:

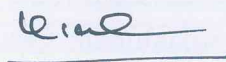
- i) Radiography /Radioscopic facilities/ Ultrasonic testing equipment.
- ii) Sand lab for green sand and core sand testing and analysis or tied up with reputed firm.
- iii) Wet gravimetric chemical analysis/Spectroscope facility or tied up with the reputed firm.
- iv) The firm should have lab facilities to check Mechanical properties.
- v) Microscopes for micro structural analysis or tied up with reputed firm.
- vi) Macro analysis facilities or tied up with reputed firm.
- vii) Gauges and Instruments.
- viii) CMM facility to check machining of castings and critical dimensions should be available in house.


(ANGA BHASKAR)

WM/
QA9


(K. RAMBABU)

WM/P


(K. RAMESH KUMAR)

JWM(SG)/QC


(K.KAMARAJ)

JWM(SG)/FMS

Approved


GM/OPS