

**REQUEST FOR PROPOSAL FOR RE-LAPPING OF
EXISTING MONOCRYSTALLINE NATURAL
DIAMOND TOOLS**



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1. Introduction

This request for proposal (RFP) is for “Re-lapping of existing Monocrystalline Natural Diamond Tools”. The RFP provides the Work flow, Specifications of Diamond tools and requirements for carrying out the relapping work along with the terms and conditions.

2. Work Flow

- Once vendor get the Purchase order, vendor will have to come in-person to SAC and collect the tools, which needs to be re-lapped. These tools will be handed over to the vendor on returnable gate pass basis for carrying out these tools outside SAC.
- Thereafter, vendor will carry out the measurement of the supplied tools at their site to determine suitability of each tool for re-lapping.
- Vendor will carry out re-lapping on only those tools which are suitable for re-lapping. Re-lapping charges for only such tools will be paid by SAC. Tools which are not suitable for re-lapping are to be returned back by vendor along with re-lapped tools and, there will be no charge to be paid for such unsuitable tools.
- After re-lapping, vendor will have to deliver the tools in-person in proper packaging condition to SAC with the SAC returnable gate pass issued at the time of collection by vendor.

3. Existing Tool Specifications

SAC will provide different varieties of tool to the vendor for Re-Lapping. Details of the tools are mentioned in Table 1.

Table 1 Existing Specifications of “Monocrystalline Natural Diamond Tools”

Sr. No.	Specification	SMT Finish Tools	Contour Diamond Finish Tools	Rough Tools
1	Radius of Tool (mm)	R +/-10%	R +/-10%	R +/-10%
2	Maximum Waviness (Peak to valley) over 100 degree window	0.1micron	0.25micron	2.0 micron
3	Top rake Angle	0°	0°	0°
4	Included Angle	60°	60°	60°
5	Top Face Taper	0+/-0.005mm	0+/-0.005mm	0+/-0.005mm
6	Conical Clearance Angle	10° +/-3°	10° +/-3°	10° +/-3°
7	Shank Material	Metal Metrix/tungsten	Metal Metrix/tungsten	Metal Metrix/tungsten
8	Visible Defects in Cutting Edge at 750X or more Magnification.	No	No	No
9	No. of Tools	09	12	15

4 Terms and Conditions

4.1 For Delivery purpose

- Vendor has to give certificate of conformance to the specifications as mentioned in table 1 along with delivery of tools.
- Vendor has to provide all the required details as per below format in Table 2.

Table 2 : Format for submission of measurement results

Sr.No.	Requirements	Before Lapping	After lapping
1	Tool ID		
2	No. of Relaps	Mention Final number	
3	Radius of Tool		
4	Maximum Waviness (Peak to valley) over 100 degree window		
5	Cutting Height		
6	Visible Defects in Cutting Edge at 750X or more Magnification.		
7	Top rake Angle		
8	Conical Clearance Angle		
9	Top face taper (mm)		

- Vendor has to provide waviness vs tool edge angular plots before lapping and after lapping for all the tools in soft and hard copy.
- Vendor has to provide images of defect free chip at 750X or more magnification after lapping for all the tools.
- Vendor has to send all the reports to the SAC through E-mail and SAC will issue dispatch clearance over an email based on the study of these reports.

4.2 For General Purpose

- Vendor is required to submit “Technical Capability Compliance Table” and “General Compliance table” at the time of submitting their offer. Offer without this will be treated as incomplete and liable for rejection.
- In any case, vendor is not able to perform Re-lapping on any tool, they may inform to SAC with that tool initial Id No. In that case, Payment will be provided to vendor as per “No. of Tools Re-lapped”, not as per Purchase Order. Therefore, while filling the Price-bid, Kindly mention the unit price also.
- Vendor should take “All Risk Insurance Policy” keeping SAC, as beneficiary.
- All tools as per Indent should be supplied in-Person to SAC in single shipment after lapping.
- Delivery should not be more than 8 weeks after receipt of purchase order.

Annexure- I (Technical Capability Compliance Table)

Table 3 Technical Capability Compliance Table

Sr.No.	Description	Specification	Technical Capability Compliance (Bidder has to fill Yes/no, considering that these specifications has met after Re-lapping of Tools)
1	Nose Radius(R)	R+/-10%	(Yes/no)
2	Maximum Waviness	SMT Finish Tools < 0.1 micron	(Yes/no)
		Contour Diamond Finish Tools < 0.25 micron	
		Rough Tools < 2.0 micron	
3	Top Rake	0 degree	(Yes/no)
4	Included Angle	60 degree	(Yes/no)
5	Top Face Taper	0+/-0.005 mm	(Yes/no)
6	Conical Clearance	10° +/-3°	(Yes/no)
7	Visible Defects	No Visible Defects in Cutting Edge at 750X or more Magnification	(Yes/no)

Table 4 General Compliance Table

Sr.No.	Description	What Vendor should write (Yes/no)
1	Vendor is agree with each point in Work Flow as section 2.	(Yes/no)
2	Vendor is agree with Terms and Condition as section 4	(Yes/no)