



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

DEPARTMENT OF MECHANICAL ENGINEERING

MACHINE TOOLS AND METROLOGY LABORATORY

This laboratory is aimed at providing an introduction to the Know-how of common processes used in industries for manufacturing parts by removal of material in a controlled manner. Auxiliary methods for machining to desired accuracy is covered by using indexing mechanisms. Evidently, acquaintance with the machine is desirable and the laboratory sessions will provide adequate opportunity for this. The students will also conduct experiments to find form and position accuracies of precision components using different industry stranded metrology instruments.

List of Equipment

S. No	Item	Make	No. of Units	Cost per Unit (Rs.)	Total Cost (Rs.)
1	Lathe machine	Anil Lathe Engineering	10	1,80,000	18,00,000
2	Drilling machine	EIFCO Machine Tools	1	69,136	69,136
3	Shaping machine	OMEGA	1	62,560	62,560
4	Planing machine	Sagar Machines	1	12,00,000	12,00,000
5	Slotting machine	Sun Rise	2	34,650	69,300
6	Milling machine	Bharat Fritz Werner Ltd	1	8,28,175	8,28,175
7	Surface grinding machine	Voltas	1	1,20,000	1,20,000
8	Vernier calipers	Yuri Make	2	4,000	8,000
9	Micrometer	Mitutoyo	6	1,166	7,000
10	2 wire and 3 wire test	Mitutoyo	1	10,000	10,000
11	Talysurf	Mitutoyo	1	1,88,051	1,88,051
12	Bore gauge	Mitutoyo	1	6,889	6,889
13	Gear teeth vernier calipers	Mitutoyo	1	4,700	4,700
14	Bevel protractor	Mitutoyo	1	2,450	2,450
15	Sine bar	Indian	1	2,000	2,000
16	Slip gauge box	China	1	6,200	6,200
17	Tool makers microscope	Metzer	1	73,7100	7,37,100
18	Surface plate	Jafuji	1	39,500	39,500
19	Cylindrical grinding machine	Swastik machines	1	63,000	63,000
20	Cutter and tool grinding machine	Addison	1	1,15,000	1,15,000
21	Universal milling machine	HMT praga	1	1,75,000	1,75,000
Total Cost (Rs.)					55,14,061
(In words: Rupees fifty five lakhs fourteen thousand and sixty one only)					