

**NATIONAL INSTITUTE OF TECHNOLOGY CALICUT
FACULTY RESEARCH SEED GRANT (FRG)-2019**

- 1 Name of the PI: Dr. Ashesh Saha
- 2 Dept: Mechanical Engineering
- 3 Mobile no: 9451545350
- 4 Title of the project: Analysis of Instabilities in Jeffcott rotor
- 5 Total project Cost requested: Rs: 5,00,000/- (Five Lakh only)
(in words)
- 6 Budget details; (in Rs) -revised budget recommended by the evaluation committee

Sl no:	Title with brief spec	Qty	Year 1	Year 2	Remarks
Equipment					
1	Laser sensor (ILD1420-200 Laser optical displacement sensor)	2		310000	* Please, refer to the remarks below
2	Motor with VFD and Coupling		20000		
3	DAQ card		60000		
4	Folded Shear Beam Load cell	2	70000		
Consumables					
5	Items like A4 Papers, lubricants, nut, bolts, etc.		8000		
Contingencies					
6	Items include fabrication charges of Setup, travel expenditure to attend conferences, conference registration cost, etc		32000		
TOTAL			190000	310000	

Justifications:

1. * Laser sensors: To measure the displacements of the rotor in two orthogonal directions (horizontal and vertical). Without these two laser sensors, our experiments could not be conducted. We plan to initiate the purchase procedure for these items in the first year so that we can place the purchase order at the beginning of second year.
2. Bearings: Experiments would be conducted with different bearings.
3. Motor with VFD and Coupling: To drive and control the speed of the rotor.
4. DAQ card: To acquire signal from load cells,
5. Folded Shear Beam Load cell: Two load cells will be used to measure the force transmitted to the base of the experimental set up via. bearing supports. These results can be used to determine the unbalanced force in the rotor.

Special request: Nil

Requested for administrative approval and financial sanction of the above expenditure

Signature of PI: *Aseha*
18/06/19

Recommendation of HOD:

Recommended & Forwarded
Rajendra Kumar
18/6/2019
HOD, MBD

Recommended by the evaluation committee:

P
18/6/19

Dean (R & C)

[Signature]
20-06-2019

DIRECTOR