



CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY

Criteria 3

Research, Innovations and Extension

Metric 3.2.1	Extramural funding for Research (Grants sponsored by the nongovernment sources such as industry, corporate houses, international bodies for research projects) endowments, Chairs in the University during the last five years (INR in Lakhs)
3.2.1.1	Total Grants for research projects sponsored by the nongovernment sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year wise during the last five years (INR in Lakhs)

Supporting Documents

1	E-copies of the grant award letters for research projects sponsored by non-government (Year : 2015-16)
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Faculty of Technology & Engineering

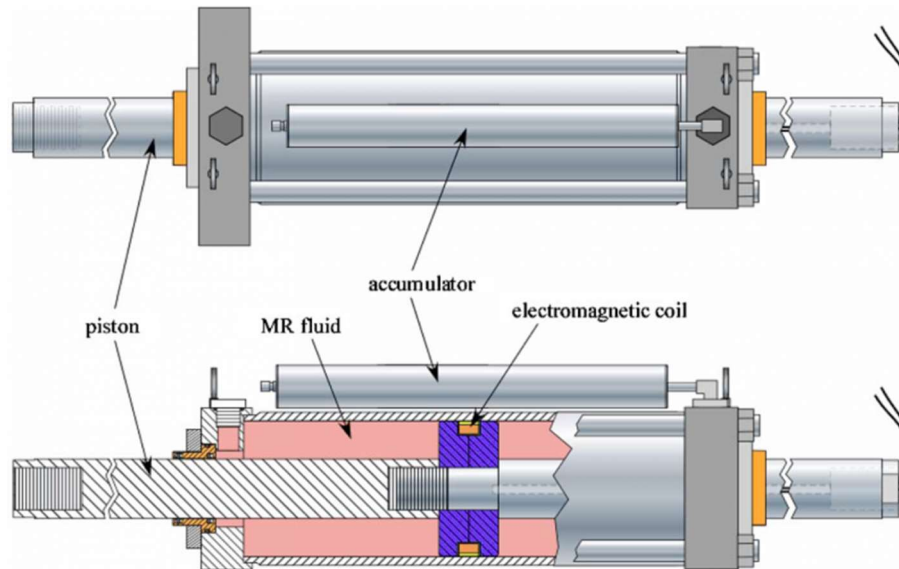
Account Ledger

For period from 01/04/2015 To 31/03/2016

Vou. Date Vou. No	Type	Description	Debit Amount	Credit Amount
		ENDOW. FUND F. D. [DEPARTMENT OF MECH. ENGG]		
		Opening Balance	2,798,926.00	
31/03/2016	J V /JV	UBI-CHANGA BRNACH ACCRUED INTEREST (260534/ -RS.)ON 31/03/2016, FOR FIX DEPOSIT- ENDOW.FUND F D. DEPT. OF MECH. ENGG(RAJENDRABHAI B ENGINEER) , TDR NO. NO.311803030449570,25,00,000/ -RS.ON 24/12/2013. AS PER BANK INTEREST CERTIFICATE.		247,161.00
		Transaction Total	247,161.00	
		Opening + Transaction Total	3,046,087.00	
		Closing Balance		3,046,087.00

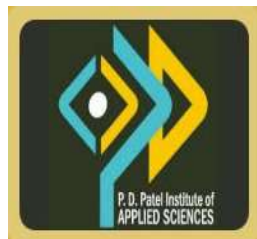
Faculty of Sciences

PROJECT PROPOSAL
OF
INDUSTRIAL RESEARCH PROJECT
**MR-FLUID SYNTHESIS AND CHARACTERIZATION FOR
DAMPER APPLICATIONS**



Submitted to

INDUSTRIAL METAL POWDERS (I) PVT. LTD.
KOREGAO BHIMA, TAL SHIRUR, DIST PUNE, INDIA



P. D. Patel Institute of Applied Sciences
Charotar University of Science and Technology (CHARUSAT)
Changa 388421, Anand District, GUJARAT
www.charusat.ac.in

Proposal

Number

Date of receipt:

APPLICATION FOR RESEARCH GRANT

SECTION – A:SUMMARY OF PROPOSED RESEARCH PROJECT

1. Title of research grant

MR-FLUID SYNTHESIS AND CHARACTERIZATION FOR DAMPER APPLICATIONS

2. Provide the outline of your Proposed Solution (Abstract)

- To Develop and characterize magnetorheological fluid for MR-damper applications.
- Thorough testing of all magnetic, rheological, and other properties of MR fluid and compare with LORD's fluids.
- To prepare specification sheet for different MR fluids for commercialization.
- To develop prototype MR damper

3. Project Duration

SIX month

4. Provide a concise background to the project high lightening the problems to be addressed

The major aim of the proposed project is to synthesis MR fluids for Damper. The innovative elements of the project are

- Design of process parameters to synthesize low sedimentation rate MR fluids.
 - Prototype MR damper for washing machine application

5. Define the specific research activities to be pursued during Project Period

- 1. Pilot synthesis of product.**
- 2. Final protocol of synthesis**
- 3. To develop prototype damper.**

6. Provide a comprehensive description of techniques to be used

This is patentable so details are not disclosed. The testing of the materials will be as per the ASTM protocol.

7. Advantages of suggested Methodological approach

- 1. Cost effective**
- 2. Unique synthesis technique reduces production cost.**
- 3. Commercially viable.**

8. List the

- Available resources**
 - 1. PDPIAS lab facilities**
 - 2. The basic required Glassware and other facilities**
- Needed Resources**
 - 1. One testing equipments.**

9. Beneficiary of the Project Research Project

Automobile industries
Damper and shaft seal applications.
Other commercial and academic purpose.

10. Briefly describe the technical Deliverables

Product for market.
Technology transfer and patent

SECTION B: PERFORMA OF EVALUATION

Sr. No.	Criteria	Remarks
1	Work proposed is original	Yes
2	Useful to the state/university	Yes
3	Such proposed research work is going elsewhere or not	No
4	Possibility of commercialization	Yes
5	Possibility of further research	Yes
6	Financial assistance asked is justified	Yes
9	Any other Comments	No

SECTION –C: PARTICIPATING RESEARCHERS AND THEIR ROLES

- **Name of the investigator**

Name	Professor R V Upadhyay
Institute Name	PDPIAS
Qualification	Ph.D
Designation	Principal Investigator
Contact	09427215242
Email	rvu.as@charusat.ac.in

- **Industrial Collaborator**

Name	Mr Prakash Dhoka
Institute Name	Industrial Metal Powders (India) Pvt. Ltd.
Qualification	Metallurgist
Designation	MD
Contact	09822026631
Email	prakash_dhoka@imp-india.com

SECTION –E: TENTATIVE BUDGET SUMMARY

1. Tentative budget Summary

Sr.No	ITEM	Univ/Project Share	Industry Share
1	Permanent Equipments	03.00	12.00
2	Consumables	02.00	00.00
3	Contingency	01.00	00.00
4.	Other Costs (outsourcing, Fabrication, Testing, Patents, etc.)	03.00	00.00
5.	Travel	01.00	00.00
Total		10.00	12.00

Please give the justification for each.

Equipments: The testing of MR damper.

Consumables: Chemicals and raw materials for synthesis.

Contingency: The amount is needed to pay testing charges for damper verification and authentication.

Mr. Prakash Dhoka
MD, IMP,Pune

Professor R V Upadhyay
PI, PDPIAS

HEMANT PATIL <hemant_patil@imp-india.com>

May 28,
2015, 5:22
PM

to Rakesh, me, ratan_oswal, pkd

Dear Sir

Cheque deposited of Rs. 12,00,000/- is debited to our account today (28th May 2015).

Kindly check at your end & confirm receipt of payment.

Thanks & Regards.

Hemant Patil

INDUSTRIAL METAL POWDERS (INDIA) PVT LTD

Direct Tel : + 91 2137 667904

Mobile : + 91 83088 12412



Rakesh Dave <rakeshdave.bt@charusat.ac.in>

May 30,
2015, 9:44
AM

to ratan_oswal, pkd, HEMANT, me

Dear Sir

Greetings

We have received the credit of Rs. 12 lacs in CHARUSAT bank account (same has been confirmed by our Accounts department).

This is for your information and record.

THE VALLABH VIDYANAGAR
COMM. CO-OP BANK LTD.,
VALLABH VIDYANAGAR-388120.
GUJ/SOS/ALTHIAVI 184/2007

भारत 79676 SPECIAL गुजरात
ADHESIVE 111056 MAY 18 2015
2010 2010 2010 2010 ONE 2010 2010 10:31
R.0000100/- P86546
INDIA STAMP DUTY GUJARAT

Memorandum of Understanding

THIS Memorandum of Understanding is made on the 19th day of May, 2015 between:-

- (A) P.D. Patel Institute of Applied Sciences (PDPIAS), a constituent of Charotar University of Science and Technology,(CHARUSAT) whose registered office is at CHARUSAT Campus, Changa – 388421, Dist. Anand, Gujarat, India; (hereinafter referred to as the “CHARUSAT”) and
- (B) Industrial Metal Powders (India) Pvt. Ltd., a unit established and governed by the laws of the Republic of India and whose registered office is at Gat. No. 699/1, Koregaon Bhima, Behind Kalyani Forge, Tal. Shirur, Dist. Pune-412 216, India (hereinafter referred to as the “Industry”)

Both the parties have the intention of undertaking a research project leading to development of commercialization of Magnetorheological fluids for damper applications. This will be an extension of the project sanctioned to PDPIAS by Department of Science & Technology, Govt. Of India, New Delhi entitled “Ferrofluid: S & T Applications”. This project will be carried out at PDPIAS, CHARUSAT, Changa and Industrial Metal Powders (India) Pvt. Ltd, Pune.




NOW IT IS HEREBY AGREED THAT:

1. INTELLECTUAL PROPERTY RIGHTS:

Any know-how, discovery or patentable invention generated as a result of this project will be the joint property of CHARUSAT, Changa and the Industry. If such discovery is patentable, the patents will be jointly filed by CHARUSAT and the Industry. Terms and conditions regarding licensing of these rights for commercialization shall be governed by a separate agreement.

2. CONFIDENTIALITY OBLIGATION:

Each party shall keep confidential and not use for any purpose, not contemplated hereunder, all proprietary information disclosed by the other party, directly or indirectly. Any discoveries, inventions or know-how resulting from the project shall be kept confidential for a period of Five (5) years from the date of termination of this Agreement, except as authorized in writing by other parties or provided herein.

3. INDUSTRIAL CONTRIBUTION:

The industrial contribution to be paid for this project are to be made as defined in the project proposal, through a demand draft / crossed valid cheque, drawn in favor of CHARUSAT, and sent to the address overleaf.

4. LIABILITY:

CHARUSAT shall not be held liable for any loss, damage, delay or failure of performance, resulting directly or indirectly from any cause, which is beyond its reasonable control (Force Majeure). The liability of CHARUSAT shall be limited to the funds received for the project.

5. DISPUTE AND SETTLEMENT:

The parties shall use their best endeavors to settle any dispute or claim to arise out of or relating to the Agreement, in supplemental agreements and their attachments thereto through amicable discussions. If not amicably settled within sixty (60) days of the dispute or claim to arise, such dispute or claim shall be decided by a panel of three (3) Arbitrators in accordance with the provisions of the Indian Arbitration & Conciliation Act, 1996. The parties agree that the decision of the majority of the Arbitrators so appointed shall be final and binding upon the parties.



6. PROJECTS FOR OTHER CLIENTS:

CHARUSAT may normally undertake other projects in the same field provided - to the best of CHARUSAT's knowledge and belief - there exists no danger of information of a confidential nature coming into hands of a third party. Any agreement to restrict CHARUSAT from undertaking similar projects during or after the life of the project shall be covered by a separate contract.

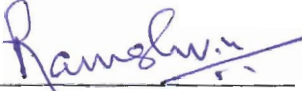
7. OTHERS:

- (i) At the end of the Project, a final report will be presented together with a know-how transfer.
- (ii) Neither party shall be using the name or trademark of the other party, for advertising purposes. However, "CHARUSAT" has the right to publish the existence of this Agreement in its normal listing of "CHARUSAT," research and Consultancy activities.

The validity of this MOU shall be for a period of 3 years from the date of signing, however this can be altered by mutual agreement.

The above terms and conditions will apply to the projects taken up by PDPIAS, CHARUSAT, unless otherwise mutually agreed to in a separate document approved by CHARUSAT.


For P D Patel Institute of Applied Sciences



Professor R V Upadhyay
Dean,
Faculty of Applied Sciences,
CHARUSAT



For Industrial Metal Powders (India) Pvt. Ltd.



Prakash Dhoka
MD, IMP.

