

Dr. SJS PAUL

MEMORIAL COLLEGE OF ENGINEERING AND TECHNOLOGY
(A Unit of Sam Paul Educational Trust)



Approved by AICTE, New Delhi, No 07/08/PON/E&T/2009/D DT/22.06.2009
Affiliated to Pondicherry University

Dr. T.V. Christy, M.E., Ph.D.,
PRINCIPAL

DrSJS/NRB/03/08/2011-12

August 29, 2011

PU/CDC/No. 1957
Dt. 2/9/11

To

Dr. R. Venguattaramane
Dean
College development Council,
R.V. Nagar, Kalapet,
Puducherry – 605 014.

Respected Sir,

Sub: Research project sanctioned to Dr. S.J.S.P.M.C.E&T – reg.

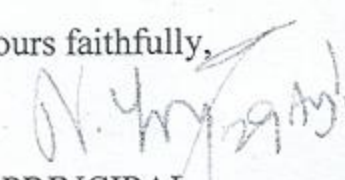
We are happy to bring to your kind notice that the NRB (Ministry of Defence) has sanctioned funds to the tune of Rs.62.5 lakhs for a research project to be undertaken at Dr. S.J.S. Paul Memorial College of Engineering & Technology, Puducherry. We request you sir to kindly publish the above information for the benefit of research / teaching fraternity and those PG degree holders in Engineering (Mechanical / Manufacturing/ Metallurgy), who might want to apply for the Research Associate position under the project. The position carries a monthly stipend of Rs.15,000/-.

Title of the Research project : "Friction Stir Welding of Aluminum Metal Matrix Composites".
Name of the Principal investigator : Prof. T.V. Christy
Contact No : 9786607576

The above project will be carried out at Dr. S.J.S.PMCET in collaboration with IIT, Madras.

Thanking you,

Yours faithfully,


PRINCIPAL
PRINCIPAL
Dr, S.J.S. PMCET

Encl: Copy of the sanction letter.

Tele : 011-2301 7510
Fax : 011-2301 7492
E-mail : dnrdoiff@hqr.drdo.in

DNRD/05/4003/NRB/206
Ministry of Defence
Naval Research Board
Directorate of Naval R&D
3rd Floor, DRDO HQ
DRDO Bhawan, Rajaji Marg
New Delhi – 110 105



25 Jul 11

✓ The Principal
Dr. SJS Paul Memorial College of Engg. & Technology
Ramanathapuram Revenue Village, Villianur Commune
Pondicherry – 605502

SANCTION OF PROJECT UNDER NAVAL RESEARCH BOARD (NRB)

1. Under the powers vested in the NRB vide Government of India, Ministry of Defence, letter No.DNRD/0100/NRB/4179/D (R&D) dated 20 Aug 96, amended from time to time, I am directed to convey the sanction of the Board for the following project :-

Title : Friction Stir Welding of Aluminum Metal Matrix Composites (Al-MMCs)
Project No. : NRB-206/MAT/10-11
PI : Prof. TV Christy, Principal
Dr. SJS Paul Memorial College of Engineering & Technology
Ramanathapuram Revenue Village, Villianur Commune
Pondicherry – 605502

2. Cost and duration of the project :- Total budget for the project is ₹.62,50,000/- (Rupees Sixty two lakhs fifty thousand only) for 03 years duration. The breakup of fund for various activities of the project is as given below: -

(Cost in ₹. Lakhs)

Head	1 st Year	2 nd Year	3 rd Year	Total
Research Staff	1,80,000/-	1,80,000/-	1,80,000/-	5,40,000/-
Specific Equipment	54,60,000/-	0	0	54,60,000/-
Consumables	1,00,000/-	0	0	1,00,000/-
Contingencies	25,000/-	25,000/-	25,000/-	75,000/-
Travel (TA/DA)	25,000/-	25,000/-	25,000/-	75,000/-
Sub Total	57,90,000/-	2,30,000/-	2,30,000/-	62,50,000/-
Institute Overheads	0	0	0	0
Grand Total	57,90,000/-	2,30,000/-	2,30,000/-	62,50,000/-

Contd....2/-

3. Aim of the Project. It is intended to study in details the effect of various process parameters of the Friction Stir Welding (FSW) of Aluminum Metal Matrix Composites (Al MMCs), viz., (Al-SiC and Al-ZrB₂) on their metallurgical and mechanical (tensile) properties.

Release of Funds and Accounting

4. Contingent bill (encl.1), duly completed, stamped and signed by the competent/ Executive Authority of the institution will be forwarded to Member Secy. NRB, for countersignature and onward transmission to PCDA (R&D), New Delhi for fund release. Duly filled in ECS proforma (encl. 2) for direct crediting of amount through the CDA (R&D) may also be forwarded to NRB, if not already submitted.

5. Six monthly progress will be submitted by the PI as per encl. 3 to NRB. Audited Statement of Accounts and Utilization Certificate (encl. 4) duly certified by the executive financial authority of the institute for each financial year are required to be submitted by 30 Jun of the ensuing financial year. Excess expenditure, beyond the yearly sanction, unless authorized by NRB in writing, shall be the responsibility of the grantee institution.

6. The date of receipt of the first installment of the grant would be reckoned as the date of commencement of the project (unless otherwise specified), which has to be intimated to the Member Secy. NRB, without any ambiguity.

7. A separate account for the grant would be maintained and interest earned thereon would be accrued in the project account by the Institute. On completion of the project, the grantee institution should send the unspent money to Member Secy. NRB through a Cheque/Draft in favour of CDA(R&D), New Delhi. A list of inventory of equipment purchased out of NRB grant shall be intimated year-wise, along with its cost and source of procurement, to Member Secy. NRB. On completion of the project, the grantee institution would forward the consolidated list with request, if any, for retention of any equipment for another project or for in-house R&D.

Review of the Project

8. The progress review of the project will be carried out periodically by the Scientific Computing Panel (minimum once in a year) during the panel meetings chaired by the Panel Head and/or as deemed fit by NRB.

9. Ownership of Intellectual Properties. As far as intellectual properties generated by this project are concerned, following conditions will apply: -

(a) The ownership of any intellectual properties generated by research performed under this grant, whether or not legally protected, shall vest in the grantee institution. The grantee institution shall promptly report to DRDO its intention to protect legally any such intellectual properties.

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(b) DRDO shall be deemed to have an irrevocable and royalty-free license to use such intellectual properties, whether or not legally protected, for such purposes as DRDO may decide, keeping the grantee institution informed.

(c) The grantee institution shall consult DRDO prior to contracting any agreement that envisages the use of such intellectual properties, whether or not legally protected, during or after the closure of the activities conducted through this grant. In any such agreement, the grantee institution shall declare that its ownership over the intellectual properties is encumbered to the extent of Para 'b' above.

(d) Neither DRDO nor the Government of India accept any liability for infringement, innocent or otherwise, by the grantee institution, or by the investigators, of the intellectual or other property rights of third parties.

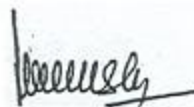
10. **Publication of Technical Papers.** The PI will seek prior clearance from DRDO for the publication of technical papers, if any, related to the project work, in Indian as well as foreign journals. The PI should also consider submitting one or two papers, out of the research work carried out under the project, to the Defence Science Journal (DSJ), being published by Defence Scientific Information & Documentation Centre (DESIDOC/DRDO, Metcalfe House, Delhi – 110054). The PIs will accordingly forward advance copy of the papers to the NRB. NRB will accord necessary clearance/issue further directions within 07 days on receipt of the request from the PI.

11. **Workshop.** Towards the end of the project, a workshop may be organised by the PI in consultation with the Panel Head and the Member Secy. NRB for dissemination of work done in the project. Proforma for workshop proposal is placed at encl. 5.

12. **Closure Report.** A Closure Report (encl.6), alongwith soft & hard copies of detailed technical report, a certificate that objectives of the project have been achieved, executive summary & unspent amount if any, will be submitted by the PI within 03 months of completion of the project.

13. PCDA (R&D), New Delhi will make disbursement of money as sanctioned.

14. The expenditure is debitable to Defence Services Estimate Major Head 2080-Defence Services-R&D, Minor Head 004-Research/Research & Development, Code Head 852/03(Technical Activities).



(PK Mishra)
Commodore
Member Secretary, NRB

Encls: As above

Copy to:-

The PCDA (R&D)
DRDO HQ Cell
West Block-5, Sector-1
RK Puram, New Delhi – 66

The Director
NMRL, Ambernath – 421506

The Director
NPOL, Thrikkakara, Kochi – 682021

The Director
NSTL, Visakhapatnam - 530027

Dr. K Prasad Rao
(Panel Head – Materials / NRB)
Dept. of Metallurgical & Materials Engineering
IIT Madras, Chennai – 400036

Prof. TV Christy, (PI)
Dr. SJS Paul Memorial College of Engineering & Technology
Ramanathapuram Revenue Village, Villianur Commune
Pondicherry – 605502

The Director
Directorate of ER & IPR
3rd Floor, DRDO Bhawan, Rajaji Marg
New Delhi – 110105

The Secretary, AR & DB
Directorate of Aeronautics
3rd Floor, DRDO Bhawan, Rajaji Marg
New Delhi – 110105

The Secretary, ARMREB
Directorate of Armaments
4th Floor, DRDO Bhawan, Rajaji Marg
New Delhi – 110105

The Secretary, LSRB
Directorate of Life Sciences
3rd Floor, DRDO Bhawan, Rajaji Marg
New Delhi – 110105

