

Procurement Plan of CSIR-AMPRI Major Lab Project, “Centre of Excellence in Graphene and its Applications” & “Graphene reinforced metal matrix composites through powder bed additive manufacturing for aerospace and defense applications”

Plan for the year 2022 and 2023

Non Recurring:

1. MultiJet and Thermal Jet Extrusion based 3D Bioprinter.
2. E Beam powder bed fusion metal additive manufacturing facility
3. Laser powder bed fusion metal additive manufacturing facility
4. Wavelength and angle resolved Cathodoluminescence spectroscopy with EDS, EBSD with FESEM
5. Four probe Hall measurement
6. Electron Energy Loss Spectroscopy as attachment to existing Joel F200 HRTEM

Recurring (Consumables):

1. AP&C Ti64 grade 5 EBM powder (for EPBF, PSD : 45 to 106)
2. AP&C Ti64 grade 23 EBM powder (for EPBF, PSD : 45 to 106)
3. AP&C Titanium grade 2 EBM powder (for EPBF, PSD : 45 to 106)
4. AP&C Ni718 EBM powder (for EPBF, PSD : 45 to 106)
5. Arcam Ti48Al2Cr2Nb powder EBM (for EPBF, PSD : 45 to 106)
6. Ni-based superalloys Alloy 625, Alloy 718, Alloy H-X (for LPBF, PSD : 15 to 53/10 to 45)
7. Austenitic stainless steel metal powder (for LPBF, PSD : 15 to 53/10 to 45)
8. Ferritic stainless steel metal powder (for LPBF, PSD : 15 to 53/10 to 45)
9. Martensitic stainless steel metal powder (for LPBF, PSD : 15 to 53/10 to 45)
10. TI-6AL-4V Grade 5 and Grade 23 (for LPBF, PSD : 15 to 53/10 to 45)
11. HC Cu (for LPBF, PSD : 15 to 53/10 to 45)