

भारत सरकार
अंतरिक्ष विभाग
विक्रम साराभाई अंतरिक्ष केन्द्र
तिरुवनंतपुरम - 695022, भारत
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Government of India
Department of Space
Vikram Sarabhai Space Centre
Thiruvananthapuram - 695 022, India
Telephone : 0471-2562444 / 2562555
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No.2/3/GSS/GR/T-7180

General Services Section,
December 22, 2020


CERTIFICATE

This is to certify that Shri Sandeep S, S/o Shri.Santhosh B, Ambat House, Thodupuzha, Idukki, Kerala, PIN 685584, has been working as Graduate Apprentice (Mechanical Engineering) at Precision and Prototype Fabrication Facility (PPFF) of Materials & Mechanical Entity (MME), Vikram Sarabhai Space Centre (VSSC), ISRO, Thiruvananthapuram with effect from 02/01/2020. Due to the Covid -19 pandemic, his training period has been extended up to 08/07/2021.

The areas of training undergoing are as follows:

- Interpretation of engineering drawings.
- 2D drawings in AutoCAD.
- 3D modeling in Mastercam X7.
- Familiarizing with general & precision measuring instruments.
- Familiarization with working of different CNC machines.
- Machining process planning of different aerospace components.
- Familiarization with different materials, work holding devices and cutting tools.
- Tool path & NC code generation using Hypermill and Mastercam X7 for different control systems.

This certificate is being issued on his request dated 21.12.2020 to apply for Master's Degree in Mechanical Engineering offered by Universities in Sweden.


(Elizabeth Thomas)
Administrative Officer

To

Shri Sandeep S
T-7180
Graduate Apprentice (Mechanical Engg)
PPFF/MME/VSSC





सत्यमेव जयते

PRECISION & PROTOTYPE FABRICATION FACILITY

IFF/MME

To whomsoever it may concern

This is to certify that **Shri. Sandeep S**, S/o Shri. Santhosh B, Ambat House, Thodupuzha PO, Idukki, Kerala-685 584, has worked as a Graduate Apprentice (Mechanical Engineering) at **Precision & Prototype Fabrication Facility (PPFF)** of **Internal Fabrication Facility (IFF)** of **Materials & Mechanical Entity (MME)**, **Vikram Sarabhai Space Centre (VSSC)**, **ISRO**, Thiruvananthapuram, for a period of one year from 02/01/2020 to 08/07/2021. (Extended due to COVID-19 pandemic)

He has gained experience in the areas of CNC programming and machining of aerospace components related to various launch vehicle programs of ISRO. He has good working knowledge in toolpath and NC code generation for 3-axis & 5-axis CNC milling machines using CAM softwares- *HyperMill 2019* and *Mastercam X7*. He has acquired in-depth knowledge in 2D drawing and 3D modeling using CAD softwares- *AutoCAD Mechanical 2018*, *CATIA V5* and *Mastercam X7*. He has got hands-on experience in reading engineering drawings, handling general and precision measuring instruments. He has shown proficiency in production planning & control, process planning and generation of manufacturing sequence & stage drawings. He has also obtained training from the allied department of Rocket & Payload Fabrication Facility.

Shri. Sandeep S. has shown very good initiative in learning new technologies and has always executed the assigned work with utmost sincerity and dedication. He is hardworking and has good commitment towards work. His conduct and character has been very good. I wish him all success in his future endeavors.

Place: Thiruvananthapuram

Date: 08/07/2021



(**Abraham K Varughese**)

एब्राहम के वरुगीस/ABRAHAM K VARUGHESE
उप महाप्रबंधक/Deputy General Manager
पी पी एक एफ/आई एक एफ/एम एम ई/PPFF/IFF/MME
वीएसएससी, तिरुवनन्तपुरम / VSSC, Thiruvananthapuram