Memorandum of Understanding

Between

MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room)
A Government of India Society

and

Birsa Institute of Technology, Sindri (BIT, Sindri)

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This MoU is entered on this day15th April 2023
at IDTR Jamshedpur

BY AND BETWEEN

MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room), Under Ministry of MSME, Government of India, a Society registered under the Societies Registration Act, 1860 bearing Regd. No. 828 having its registered office at M - 4 (Part), Phase - VI, Tata Kandra Road, Adityapur Industrial Area, Gamharia, Jamshedpur, Pin : 832108, Jharkhand, India (herein after referred to as **'IDTR'** which expression shall, unless repugnant to the context or meaning thereof, include its successors and assigns) of the FIRST PART;

AND

Birsa Institute of Technology, Sindri (BIT, Sindri), an engineering educational institute under the Department of Higher and Technical Education Department, Govt. of Jharkhand, established in 1949 at Sindri, Jharkhand.

Brief about MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room):

IDTR is a Technology Centre under Ministry of MSME, Govt. of India established as an autonomous body in the year 1991 under the bilateral agreement between Government of India & Government of Denmark. IDTR is equipped with the State-of-the-Art facilities with sophisticated plant, machinery, Labs, Class Rooms, & other infrastructure. The Centre manufactures intricate high precision Tools, Dies, Jigs, Fixtures, Moulds& precision components and also provides technological support & skilled manpower to MSMEs and Industries. IDTR conducts AICTE approved Diploma Courses in Tool & Die Making, Production Engineering & Mechatronics; NCVT approved ITI courses of Fitter, Machinist, Turner,' Tool & Die Maker, Welder & Computer Hardware and Network Maintenance; NSQF Courses approved by Ministry of MSME, Govt. of India & other short-term courses. Courses are hands on practical based with 70% practical and 30% theoretical framework. Some of the prominent technologies available at IDTR are Additive Manufacturing, Prototyping, & Reverse Engineering, EDM, Wire EDM, CNC Vertical & Horizontal Machining Centers, Surface & Cylindrical Grinding, CNC Optical Profile Grinding, CNC Jig

Grinding, CNC Turn Mill Centers, CMM, Laser Calibration, Vacuum Heat Treatment etc. Labs are equipped with the latest Hardware & Software with separate labs for Pro Engineer, Delmia, Catia, AutoCAD, Unigraphics, CNC Simulation, Welding Simulation, Computer Hardware & Networking, PLC, SCADA, VLSI, Hydraulics, Pneumatics, Robotics, Mechatronics etc.

In recent times, IDTR has developed several import substitutes & precision components e. g. Prototype Actuators for the World's largest telescope - The Thirty Meter Telescope (www.tmt.org), ceramic dental bracket for CSIR-CMERI, Slide gate mechanisms as an import substitute for Steel plants for Kwasaki Japan, Meth CO Meter for Mines, components for SARAS aircraft, Ordnance factories etc.

Brief about BIT Sindri:

BIT, Sindri began as the College of Mechanical and Electrical Engineering in 1949 at Patna. Following a year, it shifted to Sindri on 17th November 1950. Consequently, BIT Sindri was brought into the world by a principal, three Professors, and sixty undergraduates in a simple function with some tea over the dining table. The Institute developed and prospered quickly during the good 'ole days under the dynamic leadership of Prof. D.L.Deshpande, the then Director[1950-61], who is considered "The architect of the Institute."

BIT Sindri, previously known as Bihar Institute of Technology, Sindri, was a subsidiary of Ranchi College. Later it became the affiliated engineering college of Vinoba Bhave University, Hazaribagh. Currently, it is under the affiliation of the Jharkhand University of Technology, Ranchi. Hence, the degree is honored by the JUT.

The Institute, located at a distance of 28 km from Dhanbad Railway Station, is linked by rail and road. It has a rambling campus of around 450 acres of land close to the eastern bank of the river Damodar. There are 28 hostels on the campus, a separate one for boys and girls, taking special care of the residential requirements of around 3000 undergraduate, postgraduate, and research students. Along with it, the Institute is fully residential for teaching staff and non-teaching staff.

The primary aim of the Institute is to cater to the requirements of the country for Technological Manpower for development and research programs comparable to the best of the world. The college today offers B.Tech courses in 10 disciplines of engineering, namely Mechanical, Electrical, Metallurgy, Production, Chemical, Electronics & Communications, Civil, Mining, Computer Science, and Information technology.

The college has top-notch amenities, which include multimedia auditoriums, seminar rooms, a state-of-the-art, well-stocked rich e-library, well-equipped modern laboratories, and a campus-wide network. The college has various co-curricular activities, fully residential hostels, good sports facilities, and a never-dying zeal of staff and students that paves a path for the pursuit of excellence. They provide a pleasant, intellectually stimulating, proactive, and conducive environment for students to feed their curiosities and interests and help them prepare for professional, academic, and social life.

1. Objectives of this MoU:

IDTR and BIT Sindri Campus agree to share each other's competence and proficiency into synergy that would create an end result far outweighing what each individual could achieve.
Both the parties agree;

a) To exchange information on Technology, Research and Educational programs
b) To exchange information literature relevant to Technology, Research and Educational programs
c) To submit proposals of joint research projects for obtaining funding from both government and private agencies
d) To work towards establishing an Incubation Centre at BIT Sindri Campus
e) To jointly provide end to end skill training through online/offline mode including assessment and certification to the trained students
f) To jointly organize short-term continuing education programs through online/offline mode on topics of mutual interest and to invite each other's faculty to participate therein
g) To jointly organize seminars, conferences, or workshops on topics of mutual interest and to invite each other's faculty to participate therein
h) To jointly propose and engage in research and/or sponsored training programs by funding agencies (both governmental & private), and to invite each other's faculty to participate therein
i) To jointly propose and engage in training programs for external students
j) To exchange, on a reciprocal basis, faculty and students for limited periods of time for purpose of sharing information on latest developments in Technology, Education and/or Research, and workout mechanisms for credit transfer for the fulfillment of requirements for the award of the Degree/Diploma of the corresponding Institute
k) To cooperate for business incubation and design projects of students, startups and individuals
l) To cooperate for increasing outreach in catchment area of both Institutes for supporting MSMEs
m) To cooperate on any such other activities that may be identified on a consensual basis as and when such an opportunity arises
n) To work on programs for joint skill development for local people of Jharkhand

2. Focus Areas:

The following areas are identified for engagement in initial phase:

- Mechanical & Production
  - Various CAD/CAM/CAE software
  - Tool & Die- Design & Manufacturing
  - CNC programming & manufacturing
  - Non-Traditional machining such as EDM/Wire EDM
  - Reverse Engineering through 3D scanner
  - Additive Manufacturing Structural Design Analysis
  - Welding Technology
  - Vacuum Heat Treatment Furnace
  - CREO/CATIA/ANEX/ANSYS
  - Product Design
  - Metrology with CMM& Laser calibration

- Electrical & Electronics
  - SCADA/PLC
  - MATLAB
  - Automation & Process Control
  - Computer Hardware & Networking

- Civil
  - STAAD PRO

- For All Branches
  - Enterprise Resource Planning (ERP) software
  - Design Centre &Incubation Support for MSMEs
  - Entrepreneurship Development
  - Lean & other allied improvement methods
  - New emerging and high-end technologies in future

- Industry 4.0 Technologies
  - Industrial Internet of Things (IIoT)
  - Augmented Reality Nirtual Reality (ARNR)
  - 3D Printing
  - Robotics
  - Big Data Analytics and Artificial Intelligence/Machine Learning (AI/ML)
  - Simulation
  - Cloud
  - Cyber Security
  - System Integration

3. Roles and Responsibilities:

3.1 First Party - MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room) shall;

- Propose and select areas of collaboration for skill development programs
- Provide platform for registration of students for Internships/Skill Development programs
- Develop course curriculum to suit latest and future technologies
- Ensuring infrastructure so that students shall be registered and monitoring of attendance
- Prepare over all calendar of training programs through online/offline mode and communicate to institutions and students
- Organize Training programs for registered students via online and offline modes
- Encourage and support interested candidates in industrial projects as part of their internships
- On the successful completion of program, the candidate will be awarded certificate by MSME- Technology Centre, Jamshedpur (Indo-Danish Tool Room) & BIT Sindri Campus jointly
- MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room) will bring several professionals and companies to institutions to impart valuable skills and entrepreneurship abilities to students
- Provide facility to the BIT faculties (including software licenses) for conducting on-site training to the students of IDTR Jamshedpur

- Provide facility to the BIT faculty and students for carrying out their project and research work
- Prepare operational guidelines for Lab to be followed by the institution and students
- Promote Research & Development, Innovation and Entrepreneurship for interested students
- Engage students of BIT Sindri Campus to work on projects of industrial significance
- Provide internship opportunity to 10 B Tech students of BIT Sindri every academic year
- Facilitate and provide access to the facilities for 10 B Tech/ M Tech students projects every year

3.2 Second Party - BIT Sindri Shall;

- Develop the courses according to the market needs in India in collaboration with MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room) and execute with academic planning in collaboration with Technology Centre and conduct training of Staff/Faculties.
- Institute would recommend the engineering students to MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room) for internship/project work/training. BIT Sindri Campus will not pay the requisite fee. It will be the sole responsibility and discretion of the student(s) to join such course and pay a nominal fee as mutually decided by BIT Sindri Campus and MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room) for such internship/project work/training.
- Ensure infrastructure so that students shall be registered and monitoring of attendance
- Institute should consider the attendance for the students at the time of Internship/Project work at MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room)
- Depute faculty to upgrade the skills to train the students as per the curriculum and market needs
- Provide facility to the IDTR faculties (including software licenses) for conducting on-site training to the students of BIT Sindri Campus
- On the successful completion of program, the candidate will be awarded the joint certificate by MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room) & BIT Sindri Campus
- To provide support for conducting Workshops/Seminars/Job Melas and facilitate for placements
- BIT faculty shall participate as project team members as per need and expertise in research projects of MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room) from different funding agencies
- Provide free-of-cost training on advanced technologies including Robotics, Robotic MIG/MAG Welding, Robotic Resistance Spot Welding, Robotic Material Handling, 3D Printing, AR/VR, Plant Simulation Software, and Ergonomic Analysis Software to a maximum of 10 participants from MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room) every semester. The candidates will also be provided accommodation inside BIT Sindri campus on payment basis.
- Provide access to the advanced facilities situated at BIT Sindri at a concessional rate for the projects of MSME Technology Centre, Jamshedpur (Indo-Danish Tool Room)
- BIT Sindri Campus will not have any financial liability.

4. Other Provisions:

4.1 Co-ordination

Each institution shall appoint one member of its teaching/research faculty to coordinate the program on its behalf. The coordinator, thus appointed, will periodically review and identify ways to strengthen cooperation between the two institutions.

Each Institute will provide accommodation and hospitality on their respective campus for such visits under this MoU for which the parent Institute/ sending Institute shall pay from their recurring expenditures.

4.2 Course Fee:

Both IDTR and BIT Sindri Campus can charge a nominal fee in order to meet the administrative expenses towards providing the selected facilities; this will be dependent on the training courses or programs finalized during later stage.

4.3 Employment Opportunities in the Industries/establishments:

The participants of training programs would acquire adequate and appropriate skills making them fit for supervisory and managerial positions to make them industry ready respectively in Automobile/ Manufacturing/ Electronics/ IT industries.

4.4 Intellectual Property

IDTR and BIT agree to respect each other's rights to intellectual property. Further, the intellectual property rights that arise as a result of any collaborative research or activity under this MoU will be worked out on a case-to-case basis and will be consistent with officially laid down IPR policies of the two institutions.

Neither party shall share any confidential information with any third party. The sharing of such database by each other will be on trust that it will not be used by either party for providing any kind of information to any third party.

The parties shall diligently perform their respective obligation under the MoU as per the procedure set forth above.

4.5 Arbitration

All disagreements/differences of opinion/disputes regarding the interpretation of the provisions of this MoU shall be resolved by mutual consultation by the signatories.

4.6 Validity &Termination of MoU:

This MoU will take effect from the date it is signed by representatives of the two Institutions. It will remain valid for three years (3 years) from thereon with annual review and may be continued thereafter also after suitable review of MoU. Either institution may terminate the MoU by giving written notice to the other institution six months in advance. Once terminated, neither IDTR nor BIT will be responsible for any losses, financial or otherwise, which the other institutions may suffer. However, IDTR and BIT will ensure that all activities in progress are allowed to complete successfully.

4.7 Limitation of Liability:

Except as agreed and provided under this MoU, neither of the parties shall be liable to bear or pay any damages arising for the equipment's in the MSME Technology Centre, Jamshedpur (Inda-Danish Tool Room) as well as in BIT Sindri Campus.

4.8 Amendment:

It is mutually understood and agreed by and between the parties that amendment within the scope of the instrument shall be made by mutual consent of the parties, by the issuance of a written modification, signed, and dated by all parties.

This MoU is signed subject to approval of the respective academic/administrative bodies.

IN WITNESS WHEREOF, the aforementioned parties have affixed their signatures and seal on the date, month and year first above written.

MSME Technology Centre, Jamshedpur
(Indo-Danish Tool Room)

Anand Dayal
15/04/2023
Managing Director

Managing Director
Indo Danish Tool Room
Ministry of MSME, Govt. of India Society
M-4 (Part), Phase-VI
Tata Kandra Road
Gamharia, Jamshedpur

Witness:

1) 15/4/23

2) 15/4/23.

Birsa Institute of Technology, Sindri
(BIT Sindri)

15/4/23
Director

Director
B. I. T. SINDRI
(DHANBAD)

Witness:

1) Dr. Prakash Kumar, Prof. & Head PIE

2) 15-4-23 Dr. Manoj Kumar
Prof. and Head
Mechanical Engg