

FORMAT
for
Annual Progress Report for AICTE funded project under
Research Promotion Schemes (RPS)
(for each year)

(Please include sufficient details in sections 8-10 so as to facilitate proper evaluation of your project.)

File No. : 8-107/FDC/RPS/POLICY-1/2021-22
(As mentioned in sanction letter)

Date of Sanction : 11.03.2022

Subject Area : MECHANICAL ENGINEERING

1. Principal Investigator
a. (Name & Address)

: Dr. K. A. SUNDARAMAN

SSM Institute Engineering and Technology,
Kuttathupatti Village,
Begabur Post, Dindigul Taluk,
Dindigul District - 624002,
Tamilnadu

2. Project Title

: Development of Vibration Free Milling Fixture
using Machine Learning and IoT

3. Date of Commencement of the Project

: 30.03.2022

4. Amount Sanctioned by AICTE

: Rs.17,96,780

5. Amount Released by AICTE

: Rs. 15,72,182

6. Details of Expenditure

:

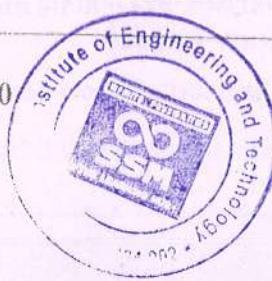
A. NON-RECURRING

S. No.	List of Equipment Procured	Cost (Rs.)
1.	CNC milling machine (drill tap machining center)	15,93,000.00
	Total	15,93,000.00

B. Recurring (Consumables, TA, Books and Stationary, Manpower etc.)

S. No.	List of Equipment Procured	Cost (Rs.)
1.	IPOL Hydropac Premium 68 SC	11,536.00
2.	MOBIL Oil Cut	5900.00
3.	BT-30 Tool Holder Kit	23,595.00
4.	Drill Chuck	5,310.00
	Total	46,341.00

Gross Total (A & B) : Rs. 16,39,341.00



D.T.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu(Po),
Palani Road, Dindigul - 624 002.

7. Objectives of the Project :

- i. To design IoT enabled fixture with sensors, to hold the workpiece and to measure the workpiece vibration at any instant of tool movement.
- ii. To capture the data relevant to workpiece vibration (in each pass of the tool) using the sensors placed with fixture.
- iii. To transmit the collected data to the cloud using IoT.
- iv. To develop suitable machine learning algorithm to learn the relationship between fixture layout and amplitude of workpiece vibration. Then, the fixture layout corresponding to minimized workpiece vibration is the final solution resulting from the algorithm.
- v. To communicate appropriate fixture layout resulting from the algorithm, to the actuators to next pass of tool for further processing.

8. Salient Research Achievements :

Summary of Progress

- i. Simulation of end milling operation has been performed on the workpiece using finite element software, to assess the influence of fixture layout on the machining accuracy (workpiece deformation).
- ii. CNC milling machine & required accessories were purchased as per the approved list. Erection and commissioning work were completed.
- iii. The feasibility and compatibility study of interfacing IoT devices with fixture and CNC machine is under progress.
- iv. Attended a six days (05.12.2022 to 10.12.2022) Faculty Development Program on "Machine Learning for Real World Applications and Research Directions with Programming Skills" (Offline mode) at Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur, Chennai-603203.
- v. Completed an online course on "Data Science for Engineers" under NPTEL-AICTE faculty development programme.

New Findings/Achievements

- i. Simulation and analysis of end milling operation showed that design of correct fixture layout is one of the promising ways to achieve the necessary machining accuracy.

Innovation Brought in : Fixture layout for end milling operation

Potential for Application

- (a) Long Term : Development of combined sensors and IoT enabled fixtures
- (b) Immediate : Sensors and IoT-enabled fixtures can transfer data during end milling operations, allow for the application of machine learning in the fixture layout

Any Other : Nil

9. List of Publications Arising from the Project (Please give Author(s). Title, Journal and Year)

Authors : Ramesh, M., K. A. Sundararaman, M. Sabareeswaran, and R. Srinivasan.

Title : **Development of Hybrid Artificial Neural Network–Particle Swarm Optimization Model and Comparison of Genetic and Particle Swarm Algorithms for Optimization of Machining Fixture Layout**

Journal : **International Journal of Precision Engineering and Manufacturing**

Year : 2022 (Link: <https://link.springer.com/article/10.1007/s12541-022-00698-z>)



**Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (MUS),
Principal**

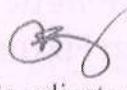
**SSIM Institute of Engineering and Technology
Ettaiyampatti Village, Sivagangai Dist.,
Tamilnadu, India, Pin Code - 624 002.**

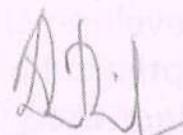
10. Patent(s) Filed/to be Filed, if any

Patent is planned to be filed after the completion of interfacing the technologies of IoT devices and machine learning algorithm with the fixture and milling machine.

Dated: 20/04/2023

Coordinator


Dr.K.A.SUNDARAMAN, M.E., Ph.D.
Associate Professor,
Department of Mechanical Engineering,
SSM Institute of Engineering and Technology,
Sindalagundu (PO), Dindigul - 624002.

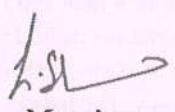


Registrar/Director/Principal
(Signature & Seal)
Dr.D.SENTHIL KUMARAN, M.E., Ph.D.,(NUS)
Principal
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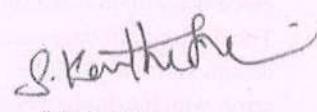
Members of Project Evaluation Committee (PEC): (to sign below)


Chairperson

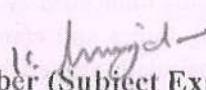
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Member

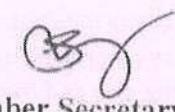
Dr. G. SANKARANARAYANAN M.E.,Ph.D.
Professor and Head,
Department of Mechanical Engineering,
SSM Institute of Engineering and Technology,
Sindhalagundu (P.O.), Dindigul - 624 002.


Member

Dr. S.KARTHIGAI LAKS
Professor & Head
Department of ECE
SSM Institute of Engg &
DINDIGUL 624 002


Member (Subject Expert)

Dr.K.Lingadurai
DEAN
ANNA UNIVERSITY
REGIONAL CAMPUS, MADURAI
KEELAKULKUDI POST, MADURAI-625018


Member Secretary

(Coordinator of the Project)

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Development of Hybrid Artificial Neural Network–Particle Swarm Optimization Model and Comparison of Genetic and Particle Swarm Algorithms for Optimization of Machining Fixture Layout

M. Ramesh¹ · K. A. Sundararaman¹ · M. Sabareeswaran¹ · R. Srinivasan²

Received: 29 April 2022 / Revised: 10 July 2022 / Accepted: 3 August 2022
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Abstract

In this research paper, a methodology is proposed by combining taguchi's parametric design with hybrid artificial neural network–particle swarm optimization (ANN–PSO) and evolutionary techniques to optimize the fixture layout by minimizing the maximum workpiece deformation on a 2D fixture workpiece system in end milling operation. Taguchi's parametric design with five levels is utilized iteratively to estimate the potential range to place the fixture elements around the workpiece using the data obtained from finite element method. The hybrid ANN–PSO model is developed to predict the maximum workpiece deformation within the potential range in which PSO is utilized to optimize the weights and biases of the network. The diversity of data used for training the model is ensured by combining the experimental conditions of central composite design and Box Behnken design of response surface methodology. The developed model is tested using root mean square error, which exhibited better prediction accuracy. The hybrid ANN–PSO model is then optimized by genetic algorithm (GA) and PSO. The results clearly indicate that the PSO is capable of producing better fixture layouts with 0.1936% of superiority in solution quality than GA. Hence, the proposed approach is more viable to design the improved fixture layout with huge reduction in time and computational complexity.

Keywords Fixture layout optimization · Artificial neural network · Finite element method · Evolutionary techniques · Genetic algorithm · Particle swarm optimization

1 Introduction

Modern manufacturing industries are aiming to accomplish improved accuracy and productivity with uniform product quality by reducing cost and time incurred in new product development. Effective and efficient fixture layout design can assure uniformity among the machined parts, thereby improving the accuracy in subsequent phases. While machining, externally applied clamping and machining forces induces deformation in workpiece, causing certain imperfections. This in turn impose restrictions for achieving

the desired tolerance specifications and dimensional quality. During machining operation, the workpiece deformation is highly influenced by the layout of fixture elements, machining forces and clamping forces. The machining forces, particularly applied for material removal, will induce load or moment on the workpiece, which can be resisted by the application of adequate clamping forces. Hence, these two forces cannot be decreased beyond certain magnitude. Further, 20 to 60% of machining error is mainly caused by improper fixture design [1]. Therefore, the promising way of minimizing the workpiece deformation is to optimize the design of fixture layout, by which the required accuracy could be achieved, leading to increase in quality, productivity and decrease in rejection rate.

Traditionally, fixture layout was designed by the experience and expertise of the designer that resulted in huge time and cost. Rigid body models were developed for optimizing the fixturing configuration and/or clamping force problems [2–7], and were unable to predict the workpiece deformation. The finite element method (FEM) was applied

✉ K. A. Sundararaman
arunsunder@rediffmail.com

¹ Department of Mechanical Engineering, SSM Institute of Engineering and Technology, Kuttathupatti Village, Sindalagundu Post, Dindigul, Tamil Nadu 624 002, India

² Department of Mechanical Engineering, RVS College of Engineering, RVS Nagar, Paraiappatti Post, Dindigul, Tamil Nadu 624 005, India



SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
College of Engineering and Technology
Department of Mechanical Engineering

Six-days Faculty Development Program

on

Machine Learning for Real World Applications and Research Directions with Programming Skills

Certificate of Participation

This is to certify that Dr/Mr/Ms/Mrs

..... from
Department of Automobile Engineering, SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

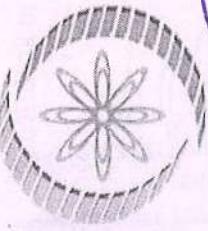
Dr. K. A. SUNDARAMAN

Faculty Development Program on "Machine Learning for Real World Applications and Research Directions with Programming Skills",
Organized by the Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur held on 05th – 10th December 2022.

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Principal
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Coordinator
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Department of Mechanical Engineering, SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY
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Dr. K. L. Lingadurai
DEAN
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ANAL CAMPUS, MADURAI
Dr. M. GHERALAI
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Co-Convenor
Sindalagundu Village, Sindalagundu (Po),
Department of Mechanical Engineering, SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY
Palani Road, Dindigul - 624 002.



NPTEL-AICTE Faculty Development Programme



(Funded by the MoE, Govt. of India)



This certificate is awarded to

SUNDARAM KA

for successfully completing the course

Data Science for Engineers

with a consolidated score of **55 %**

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Dr.K.A.SUNDARAMAN, M.E., Ph.D.
Associate Professor,
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SSM Institute of Engineering and Technology,
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Roll No: NPTEL23CS17S44480364

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Dr.K.LINGAD
Principal
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Dr.K.LINGAD
DEAN
ANNA UNIVERSITY
(Jan-Mar 2023)
REGISTRATION NO.: 2015/2016
REGISTRATION NO.: 2015/2016
ROLL NO.: 2015/2016
NPTEL Course : 8 Weeks

The candidate has studied the above course through MOOCs mode, has submitted Online assignments and passed proctored exams.

This certificate is therefore acceptable for promotions under CAS as per AICTE notifications dated 24th July 2018, similar to other refresher / orientation courses.

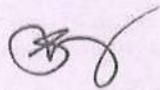
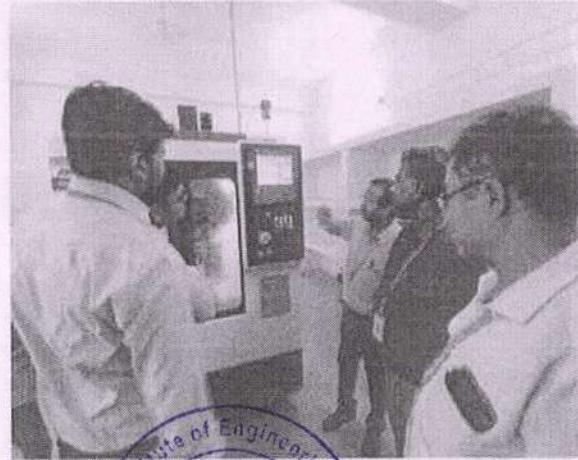
F.No.: AICTE / RIFD / FDP through MOOCs / 2017-18

17/03/2023

Programming Techniques of CNC Milling

A training to faculty members of Mechanical Engineering was conducted 16/03/2023 and the following concepts were discussed.

- i. Coordinate System (Absolute, increment, & Polar) G90 G91G16 G15
- ii. Programming techniques of CNC Milling

**PRINCIPAL INVESTIGATOR**

Dr.K.A.SUNDARARAMAN, M.E., Ph.D.,
Associate Professor,
Department of Mechanical Engineering,
SSM Institute of Engineering and Technology,
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**PRINCIPAL**

Dr.D.SENTHIL KUMARAN, M.E., Ph.D.,(NUS)
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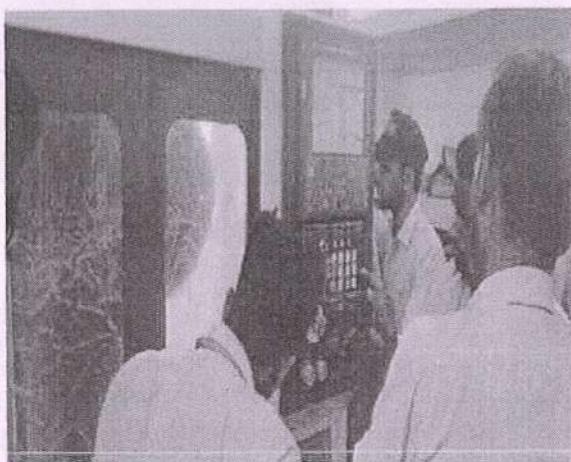
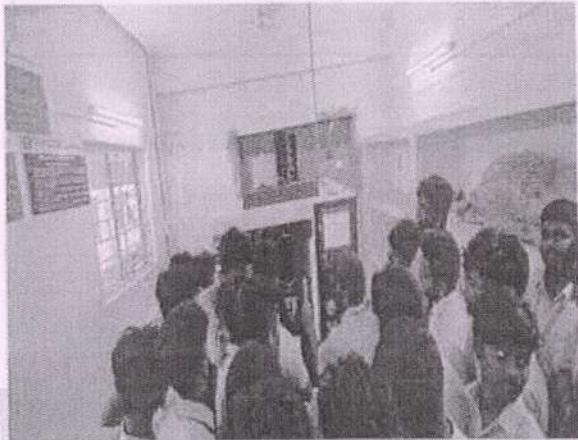
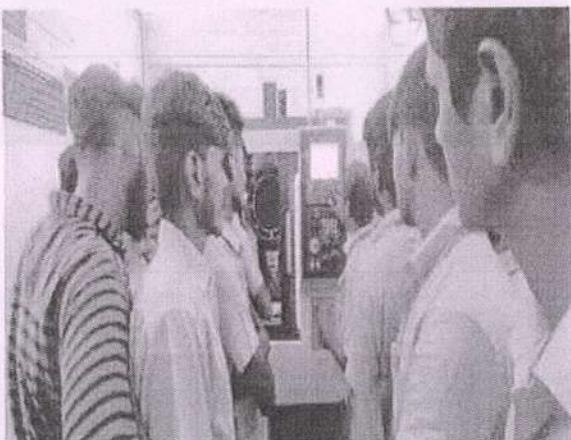
Dr.D.SENTHIL KUMARAN, M.E., Ph.D.,(NUS)
Principal
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Palani Road, Dindigul - 624 002.

10/03/2023

CNC Training Course - Basic Milling

A training course on Basic CNC Milling was given to the thirty students of Mechanical Engineering on 09/03/2023. The topics discussed in the course was as follows.

- i. Basic Machining Centre Principles
- ii. Different Models of Machine and Controls
- iii. Operating Principles
- iv. Basic Components of the machine (Spindle, drives, Measuring systems, Encoders & Ball Screws, pallets)
- v. Basic Machining Introduction

**PRINCIPAL INVESTIGATOR**

Dr.K.A.SUNDARARAMAN, M.E., Ph.D.,
Associate Professor,
Department of Mechanical Engineering

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (MUS),

Principal

SSM Institute of Engineering and Technology

Kuttathupatti Village, Sindalagundu (Po).

PRINCIPAL
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Principal

SSM Institute of Engineering and Technology



SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi / Affiliated to Anna University, Chennai / Accredited by NAAC)
(NBA Accredited – ECE, EEE and MECH)

Dindigul – Palani Highway, Dindigul-624002

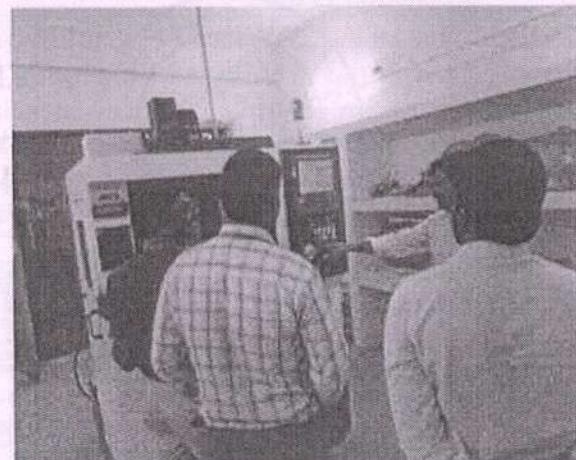
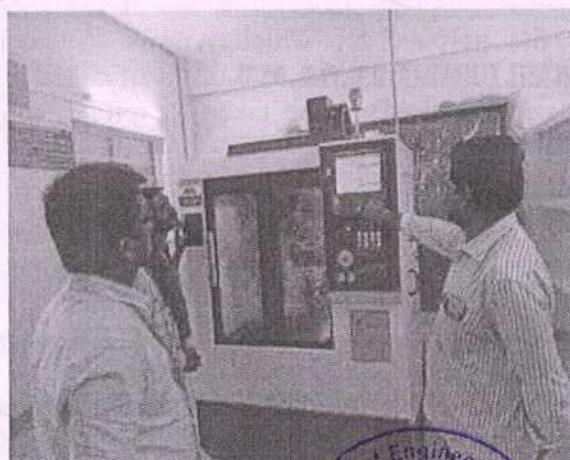
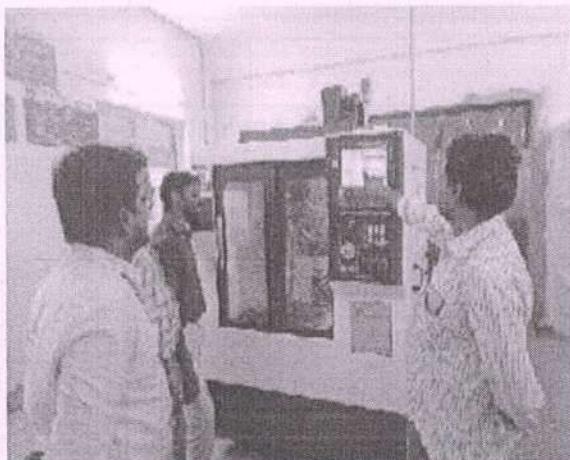
DEPARTMENT OF MECHANICAL ENGINEERING

01/03/2023

Practical Training on CNC Milling Machine

A practical training was provided to the five technical staff members of Mechanical Engineering on 28/02/2023 and the following concepts were discussed.

- i. Programming, setup and operation of CNC milling
- ii. Monitoring machine movement and speed



PRINCIPAL INVESTIGATOR

Dr.K.A.SUNDARARAMAN, M.E., Ph.D.,

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Sindalagundu (PO), Dindigul - 624002.


PRINCIPAL

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Principal

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Principal

SSM Institute of Engineering and Technology

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Palani Road, Dindigul - 624002.

Kuttathupatti Village, Sindalagundu (Po),

Palani Road, Dindigul - 624002.

FORMAT
for
UTILIZATION CERTIFICATE
(for each year)

Sanction Letter No. **8-107/FDC/RPS/POLICY-1/2021-22**

Date: 20.04.2023

A. NON-RECURRING

Sl. No.	Name of the Equipment Procured	Amount Sanctioned	Amount Utilized (Item wise)	Unspent Balance
1.	CNC milling machine (drill tap machining center)	13,47,585.00	13,47,585.00	Nil

B. RECURRING

Sl. No.	Name of the Expenses	Amount Sanctioned	Amount Utilized	Unspent Balance
1.	IPOL Hydropac Premium 68 SC		11,536.00	
2.	MOBIL Oil Cut		5900.00	
3.	BT-30 Tool Holder Kit		23,595.00	
4.	Drill Chuck		5,310.00	
5.	Recurring grant used for the item (non-recurring) sanctioned by the AICTE: CNC milling machine (As mentioned in III. General Instructions, S.No.5 of the RPS – Sanction Letter)	2,24,597.00	1,78,256.00	Nil

Certified that the grant has been utilized for the purpose for which it was sanctioned in accordance with the Terms and Conditions. In case of objection some irregularity is noticed at a later stage, provision will be taken to refund, adjust or regularize the amount objected to.

Finance Officer
(Signature & Seal)

For **R.GOVINDAN & CO**
Chartered Accountants
FRN:007014S

CA. K. BALASUBRAMANIAN B.Sc., F.C.A.
Partner (M.No: 201933)

UDIN : 23201933 BWARD 7540

Dated:



SSM Institute Engineering and Technology,
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.

Registrar /Principal/ Director
(Signature & Seal)
Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (IUS)
Principal

SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.

SSM Institute Engineering and Technology,
Kuttathupatti Village, Begambur Post,
Dindigul Taluk, Dindigul District - 624002, Tamilnadu

Name and Address of the University/ Institution

Note: The Utilization Certificate (UC) will be signed by the Registrar/ Finance Officer in the case of Universities, Principals in the case of Colleges and Executive Heads of other Institutions. The Provisional UC may be countersigned by the internal auditors wherever the system of the internal audit exists. In case of the Self Financing/ Private Institutions, UC has to be signed by a Chartered Accountant.

* This is to be submitted every financial year.

ACE MANUFACTURING SYSTEMS LIMITED

Plot Nos. 467-469, 12th Cross, 4th Phase, Peenya Industrial Area, Bangalore-560058
 Tel: 080-41828100, Fax: (080) 41828102, CIN: U85110KA1994PLC015321, Email:helpdesk@amsindia.co.in, Website: www.amsi.in
 GSTN NO:29AACCA3584G1ZL Dated: 13.01.2017 ; PAN NO:AACCA3584G ; State Code : 29 (Karnataka)

ORIGINAL FOR RECIPIENT/BUYER
AMS
 In Pursuit of Excellence

GST INVOICE

Details of Receiver (Billed To): CC: 112059 M/s. SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL PALANI HIGHWAY, DIST.		Details of Consignee (Shipped To): CC: 112059 M/s. SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL PALANI HIGHWAY, DIST.	
DINDIGUL 624002 Tamil Nadu INDIA GSTIN PAN No State Code		DINDIGUL 624002 Tamil Nadu INDIA GSTIN PAN No State Code	
Hypotheceation To:		Customer Advance Receipt Details	

Transaction Type:	Inter-State Sale
Purchase Order No & Date :	SSMIEIT/01/122-23 23.05.2022

Tax payable on Reverse Charge Basis: NO

Sl. No	Material code	Material Description	HSN/S AC	Qty.	UOM	Rate/Each Rs.	Discount %	Total Ass. Value	Packing & Forwarding	Freight	Insurance	Taxable Value	SGST %	Value Rs.	CGST %	Value Rs.	IGST %	Value Rs.	Grand Total
1	SPARK	CNC DRILL TAP MACHINING CENTER MODEL "SPARK" [M14-542]	84571 020	1	EA	1,350,000.00	0.00	1,350,000.00	0.00	0.00	0.00	1,350,000.00	0.00	0.00	0.00	0.00	0.00	0.00	1,350,000.00
		TOTAL		1	EA	1,350,000.00	0.00	1,350,000.00	0.00	0.00	0.00	1,350,000.00	0.00	0.00	0.00	0.00	0.00	0.00	1,350,000.00

Amount in Words

SGST : Rs 0.00 (Rupees Nil only)

CGST : Rs 0.00 (Rupees Nil only)

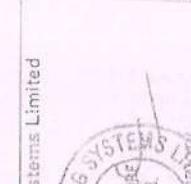
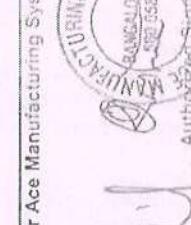
IGST : Rs 243,000.00 (Rupees Two Lakh Forty Three Thousand only)

Total Inv Value: Rs 1,593,000.00 (Rupees Fifteen Lakh Ninety Three Thousand only)

Declaration:

Certified that the particulars given above are true and correct and amount indicated in the documents represents price actually charged by us and that there is no flow of additional considerations directly or indirectly from the buyer. * Delay in receipt of payment after the due date will attract interest as applicable.
 * All disputes subject to Bangalore Jurisdiction.

Remarks:

Our Bank Details:		For Ace Manufacturing Systems Limited
Standard Chartered Bank 3rd Floor, Vaishnavi Serinity, 112, 5th Block, Koramangala Industrial Area, Bangalore - 560 095 OD A/c No. 455-0-533291-5 IFSC No: SCBL0036073	 	For Ace Manufacturing Systems Limited

Dr.K.A.SUNDARARAMAN, M.E., Ph.D.,
 Associate Professor,

Department of Mechanical Engineering,
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TAX INVOICE

(ORIGINAL FOR RECIPIENT)

TRICHY MACHINE TOOLS (Franchisee of Micromatic Machine Tools Pvt.Ltd) Ground Floor, A- Block, TIDITSSIA Building, SIDCO Complex, Industrial Estate, Ariyamangalam, Trichy-620010 GSTIN/UIN: 33AAHFT8803B1ZG State Name : Tamil Nadu, Code : 33 E-Mail : mmtrityaccts@acemicromatic.com	Invoice No. TMT/ECO222397	Dated 15-Feb-23
	Delivery Note	Mode/Terms of Payment IMMEDIATE
	Reference No. & Date. TMT/Q/2223/477 dt. 15-Feb-23	Other References
Buyer (Bill to)	Buyer's Order No. SSMIET/012/22-23	Dated 24-May-22
SSM Institute of Engineering and Technology Dindigul-Palani Highway, Dindigul-624002 State Name : Tamil Nadu, Code : 33	Dispatch Doc No.	Delivery Note Date
	Dispatched through COURIER	Destination
	Terms of Delivery	

Amount Chargeable (in words)

E. & O.E

Indian Rupees Forty Six Thousand Three Hundred Forty One Only

Taxable Value	Central Tax		State Tax		Total Tax Amount
	Rate	Amount	Rate	Amount	
39,272.00	9%	3,534.48	9%	3,534.48	7,068.96
Total: 39,272.00		3,534.48		3,534.48	7,068.96

Tax Amount (in words) : Indian Rupees Seven Thousand Sixty Eight and Ninety Six paise Only

Company's PAN : AAHET8803B

Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

Company's Bank Details

Ac Holder's Name : TRICHY MACHINE TOOLS

Bank Name : KARUR VYSYA BANK

A/c No. : 1661135000000727
Encl. 1 of MS. O. 1 - MADHUMANANDAM & M/P

Branch & IFS Code: KARUMANDAPAM & KVBL001661

SUBJECT TO TRICHY JURISDICTION

This is a Computer Generated Invoice

• 111 •

10

10 of 10

RICHY 12-1

FORMAT
For
AUDITED UTILISATION CERTIFICATE
(For each year)

Certified that out of Rs.17,96,780 of Grant-in-aid sanctioned during the year 2021-22 Letter No. 8-107/FDC/RPS/POLICY-1/2021-22 Rs. 15,72,182 has been received and utilized for the purpose of conduct of project titled "Development of Vibration Free Milling Fixture using Machine Learning and IoT" under Research Promotion Scheme. For which it was sanctioned and the balance of Rs. 0.00 remaining unutilized at the end of the year, in addition to the amount of Rs. 0.00 on account of interest accrued on grant, has been surrendered to All India Council for Technical Education (vide No. _____) dated _____ will be adjusted towards the Grants-in-aid payable during the next year i.e., Rs.2,24,598 as per the details attached.

Certified that the grant has been utilized as per laid down terms and conditions for which it was sanctioned.

Finance Officer
(Signature and Seal)

Dated:

For **R.GOVINDAN & CO**
Chartered Accountants
PRN : 007014S

CA. K. BALASUBRAMANIAN B.Sc., F.C.A.
Partner (M.No : 201933)

Chartered Accountant
(Signature and Seal)

UPIN : 23201933 BGWARC 9977

Registrar/Principal/Director
(Signature and Seal)

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)

Principal

SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.

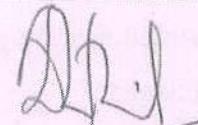


Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal

SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.

RECEIPT & PAYMENT ACCOUNT
(for each year)

Sl.No.	Receipt	Amount (Rs.)	Sl.No.	Payments	Amount (Rs.)
1.	To Opening Balance	0.00	1.	Purchase order along with advance	4,25,250.00
2.	To Grants Received by AICTE	15,72,182.00	2.	Balance payment against purchase order	9,92,250.00
3.	To Interest (if any)	0.00	3.	Payment made due the GST Revision from 5% to 18%	1,75,500.00
4.	From SSM Institute of Engineering and Technology, Dindigul	67,159.00	4.	Tools & Accessories	46,341.00
				Closing Balance	0.00
	Total	16,393,41.00		Total	16,393,41.00



(Signature of Chartered Accountant)

Name of CA : **For R.GOVINDAN & CO**

Chartered Accountants

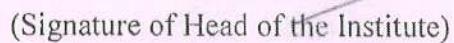
FRN: 0070148

Membership No. :

Full Address of CA :

[With seal] **CA K. BALASUBRAMANIAN B.Sc., F.C.A.,**
Partner (M.No: 201933)

UDIN : 23201933 BG1WARF 5309



(Signature of Head of the Institute)

Name : **Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (MUS)**

Designation : **Principal**

Full Address : **SSM Institute of Engineering and Technology**

[With seal] **Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.**



(Signature of Finance Officer)

Name :

Designation :

Full Address

: [With seal]

(Govt./Govt. Aided/University & wherever applicable)

Dated : _____



**Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (MUS),
Principal**

**SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002,**

Phone 0451 - 2448800 - 2448899 (100 lines)
Fax 0451 - 2448855

E-Mail
Web

ssmietsel@gmail.com
www.ssmiet.com

S.CHENNIMALAI GOUNDER CHARITABLE TRUST
SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY,
Palani Road, Sindalagundu Post,
Dindigul Dist. - 624 002

PURCHASE ORDER

To

1 Ace Manufacturing System,
Plot no:467 to 469, 4th phase,
Peenya Industrial Area,
Bangalore -560058.
Mobile: 8041828091.

No. : SSMIET / 011 / 22-23
Date : 23.05.2022

With reference to your Quotation Ref no & dated: AMS/AMS 71758, 22.04.22, We have pleasure in placing our order for supply of the following materials as per terms & conditions.

S.No	Description	Quantity/ Nos.	Rate/unit Rs.	Discount % Rs.	Total Rs.
1.	CNC Drill Tap Machining Center Model: SPARK (As per the list enclosed)	1 Nos	1350000.00	-----	1350000
	Dr. D. SENTHIL KUMARAN, M.E., Ph.D. (NUS) Principal SSM Institute of Engineering and Technology Kuttrathupatti Village, Sindalagundu (Po), Palani Road, Dindigul - 624 002 Gst @5%				6750C
	Net Amount				14,17,50

Advance 30% - 4,25,250/-

Delivery: Ten weeks from the date of order confirmation.	Payment Terms: 30% Advance along with Order & Balance against PI before dispatch of Machine.
ED/VAT: Inclusive of all taxes.	Special terms: Transport & transit insurance are paid by Supplier.
Dispatch: F.O.R. Our College premises.	Warranty: 12 Months from the date of commissioning of the Machine.

Dr.K.A.SUNDARAM, M.E., Ph.D.
Associate Professor,
Department of Mechanical Engineering,
SSM Institute of Engineering and Technology,
Sindalagundu (PO), Dindigul - 624002.



S.O./A.O.

HOD

PRINCIPAL

Dr. D. SENTHIL KUMARAN, M.E., Ph.D.
Principal
SSM Institute of Engineering and Technology
Kuttrathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002
Chairman and Managing Trustee

AMG CASHIER 2022/03/05 103.00

8.00 AM - 10.00 AM



Ace Manufacturing Systems Ltd

Plot Nos. 467 to 469, 12th Cross, 4th Phase, Peenya Industrial Area,
Bangalore, Karnataka, India -
Main Ph.: +91 828089 Fax: 91-80-41 828091
E-mail: info@amsindia.co.in
Website: http://www.ams.in



GSTIN No. : 29AACCA3584G1ZL PAN No. : AACCA3584G

Subjected to BANGALORE - JURISDICTION

Proforma Invoice

Date: 29-11-2022

Ref No. AMS/P/I/2022-2023/ORD-101979-C9S6M6

Details of Receiver (Billed to)

SSM Institute Of Engineering And Technology

Dindigul-Palani Highway..Dindigul, Tamil Nadu - 624002

Dindigul-624002

Tamil Nadu

GSTIN No NA

PAN No NA

Details of Consignee (Shipped to)

SSM Institute Of Engineering And Technology

Dindigul-Palani Highway..Dindigul, Tamil Nadu - 624002

Dindigul-624002

Tamil Nadu

GSTIN No NA

PAN No NA

Sl.No	Description	HSN	Qty	Rate Rs.	Amount Rs.	Packing Charges Rs.	Insurance Charges Rs.	Freight Charges Rs.	Sub Total Rs.	IGST Rate	CGST Rate	SGST Rate	TCS Amount	TCS Tax Amount	Total
1	CNC Drill Tap Machining Center Model: SPARK & with all accessories as per scope of supply	84592100	1	13,50,000.00	13,50,000.00	0.00	0.00	0.00	13,50,000.00	18%	2,43,000.00	0%	0.00	0.00	15,93,000.00
Sub Total															
Less Advance + Other Payments Received															
AMOUNT PAYABLE BEFORE DISPATCH															
Rupees in words : One Lakhs Seventy Five Thousand and Five Hundred Rupees Only															
RTGS Details: Beneficiary Name: Ace Manufacturing Systems Ltd, Beneficiary Bank: Karnataka Bank Limited, Karnataka Bank Limited, Karnataka - 560001 IFSC Code: KARB0000118, Account No: 1187000100006601															

Terms and Conditions: Payment should be made within due date or interest will be charged @ 18% P.A.

Notes:

Prepared By : Immery sales

K.A.SUNDARAMAN, M.E., Ph.D.
Associate Professor,Department of Mechanical Engineering,
I Institute of Engineering and Technology,
Sindlagundu (PO), Dindigul - 624002.Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (MVS),
PrincipalSSM Institute of Engineering and Technology
Kuttathupatti Village, Sindlagundu (Po),
Palani Road, Dindigul - 624002.

For Ace Manufacturing Systems Ltd,
Tr
AUTHORIZED SIGNATORY

Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (MVS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindlagundu (Po),
Palani Road, Dindigul - 624002.

K.A.SUNDARAMAN, M.E., Ph.D.
Associate Professor,

[TO BE PUBLISHED IN PART II, SECTION 3, SUB-SECTION (i) OF THE GAZETTE OF INDIA,
EXTRAORDINARY]

GOVERNMENT OF INDIA
MINISTRY OF FINANCE
(Department of Revenue)

Notification No. 11/2022-Integrated Tax (Rate)

New Delhi, the 13th July, 2022

G.S.R. (E).-In exercise of the powers conferred by sub-section (1) of section 6 of the Integrated Goods and Services Tax Act, 2017 (13 of 2017), the Central Government, on the recommendations of the Council, hereby rescinds the notification of the Government of India in the Ministry of Finance (Department of Revenue) No. 47/2017-Integrated Tax (Rate), dated the 14th November, 2017, published in the Gazette of India, Extraordinary, vide number G.S.R.1396(E), dated the 14th November, 2017, except as respects things done or omitted to be done before such rescission.

2. This notification shall come into force on the 18th day of July, 2022.

F.No.190354/172/2022-TRUJ

(Vikram Vijay Wanre)

Under Secretary to the Government of India

BS
28/04/23

Abd

Dr.K.A.SUNDARAMAN, M.E., Ph.D.,
Associate Professor,
Department of Mechanical Engineering,
SSM Institute of Engineering and Technology,
Sindlagundu (PO), Dindigul - 624002.

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindlagundu (Po),
Palani Road, Dindigul - 624 002.

Rb



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindlagundu (Po),
Palani Road, Dindigul - 624 002.

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TAX INVOICE

TRICHY MACHINE TOOLS 0/condigere of Micromatic Machine Tools (Pvt) Ltd Ground Floor, A-Block, TIDITERSA Building, EDCO Complex, Industrial Estate, Adyararpalayam, Trichy-620010 GSTIN/UIN: 39AAHHT8803B1ZG State Name : Tamil Nadu, Code : 33 E-Mail : trichymach@gaemicromatic.com	Buyer (Bill to) SSM Institute of Engineering and Technology Dindigul-Palani Highway, Dindigul-624002 State Name : Tamil Nadu, Code : 33	Invoice No. TMT/ECO222397	Dated 15-Feb-23
		Delivery Note	Mode/Terms of Payment IMMEDIATE
		Reference No. & Date TMT/022397 at 15-Feb-23	Other References
		Buyer's Credit No.	Dated
		SSMIET/012/22-23	24-May-22
		Dispatch Due No.	Delivery Note Date
		Dispatched through COURIER	Destination
		Terms of Delivery	

Amount Chargeable (in words)

Indian Rupees Forty Six Thousand Three Hundred Forty One Only

Taxable Value	Central Tax Rate	Central Tax Amount	State Tax Rate	State Tax Amount	Total Tax Amount
39,272.00	8%	3,141.60	9%	3,534.48	7,000.00
Total: 39,272.00		3,141.60		3,534.48	7,000.00

Tax Amount (in words) : Indian Rupees Seven Thousand Sixty Eight and Ninety Six paise Only

Company's PAN : AAHETB809B

Ocular

DECLARATION
We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

Customer Seal and Signature

Comments from Stakeholders

6.6 Holder's Name: BIRCHY MACHINE TOOLS

Bank Name : KARUR VYSYA BANK

Bank Name : KAROK VISTA BANK
Acct No. : 1661135000000727

PRINTED IN U.S.A. 100-300000000724
FRAZER & LEE CO. KARUMANGAPAM - FVB1000100

ENTERTAINMENT WEEKLY 103

Frequency

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SUBJECT TO THICKY SIGNATURE

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Research Promotion Scheme

FORMAT FOR STATEMENT OF EXPENDITURE

AICTE File No. : 8-107/FDC/RPS/POLICY-1/2021-22

Title of the RPS Project : Development of Vibration Free Milling Fixture using Machine Learning and IoT

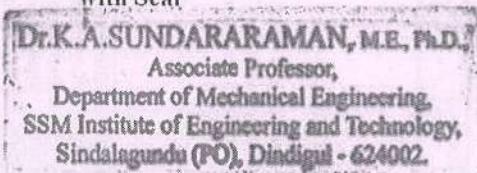
Name of the P.I. : Dr. K. A. SUNDARARAMAN

Sanction Order No. & Date	Grant Sanctioned	Details of expenditure Incurred Item wise	Amount Rs. (In each head)
8- 107/FDC/RPS/P OLICY-1/2021- 22 dated on 11.03.2022	Rs.17,96,780	CNC milling machine (drill tap machining center)	15,93,000.00
		IPOL Hydropac Premium 68 SC	11,536.00
		MOBIL Oil Cut	5900.00
		BT-30 Tool Holder Kit	23,595.00
		Drill Chuck	5,310.00

(1) _____

ABD 20/04/23

Signature of PI
with Seal



(2) _____

Name and Signature of
Head of Institution with Seal
Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (MUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundi (Po),
Palani Road, Dindigul - 624 002.

(3) _____

Signature (with Seal) of the Finance Officer/
Auditor/Accounts Officer
(If it is Govt./Govt. Aided Institute)

Name of Chartered Accountant : **GIRI GOVINDAN & CO**
Chartered Accountants
Membership No : FRN : 0070148

Rubber stamp :
Full Address of C.A.K. BALASUBRAMANIAN B.Sc., F.C.A.,
Partner (M.No : 201933)
UDIN : 23201933 BGWARE 6588

Date:

Note:-If it is more than one page, each page must be signed & Stamped in all annexure.



Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (MUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundi (Po),
Palani Road, Dindigul - 624 002.

MANUFACTURING SYSTEMS LIMITED

Plot Nos. : 67-469, 12th Cross, 4th Phase, Peenya Industrial Area, Bangalore-560058
Plot Address: 080-41281000, Fax: 080-41281012, CIN: U56110KA1994PLC035284G
GSTN NO: 29A0ACCA358G
Dated: 13/01/2017
State Code: KA
Email: helptech@peenya.com

DamsIndia.co.in, Website: www.amsi.in
© [Karnataka]

ORIGINAL EOE RECIPIENT/BUYER

GST INVOICE

Details of Receiver (Billed To):	CC: 112059 M/s. SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL, PALANI HIGHWAY, DIST.	Details of Consignee (Shipped To):	CC: 112059 M/s. SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL, PALANI HIGHWAY, DIST.
GST Invoice No.	221104033	GST Invoice Date	19.12.2022
Billing Document No.		Outbound Delivery No.	60028108
Sale Order No.		Date of Removal	4042638
Time of Removal		Time of Removal	3015431
DIST.		DIST.	19.12.2022
PAN No.		PAN No.	18:52:33
Shoe Code :		Shoe Code :	



DRAFT DATA

Customer/ Avenue Receipt No.	Receipt Date	Amount (Rs)
------------------------------	--------------	-------------

Total CGST:	243,000.00
Total IGST:	243,000.00
Total Tax Amount (GST):	486,000.00
TCS (0.075%):	0.00
Sub Total:	486,000.00
Round off:	0.00
Total:	486,000.00
Less Advance:	0.00
Grand Total:	486,000.00

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emarks:

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A circular logo for ACE Manufacturing Systems Limited. The outer ring contains the text 'ACE MANUFACTURING SYSTEMS LIMITED' in a stylized font. The inner circle features a central figure, possibly a person or a machine, surrounded by the words 'MANUFACTURING' at the top and 'SYSTEMS' at the bottom.

DR. D. SENTHIL KUMARAN, M.S., Ph.D., (MUS)

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Principals
SSM Institute of Engineering and Technology
Kuttathunatti Village Sandalagandu [Po],
P.O. N. Road [Vijaynagar] 624 002.

Department of Mechanical Engineering,
SSSM Institute of Engineering and Technology,
Simdhalagundi (PO), Dindigul - 624002.

TAX INVOICE

(OPTIONAL FOR RECIPIENT)

TRICHY MACHINE TOOLS

Franchisee of Micromatic Machine Tools Pvt Ltd
Ground Floor, A-B Block, TIDOTSSC Building,
SIDCO Complex, Industrial Estate,
Ayyamangalam,
Trichy-620010
GSTIN/TIN: 33AAHTT8803B1263
State Name : Tamil Nadu, Code : 33
E-Mail : rommyacc@micromatic.com

Buyer (Bill to)

SSM Institute of Engineering and Technology
Dindigul-Palani Highway, Dindigul-624002
State Name : Tamil Nadu, Code : 33

Invoice No.	Dated
TMT/CO222397	15-Feb-23
Delivery Note	Mode of Terms of Payment
	IMMEDIATE
Reference No. & Date	Other References
TMT/CO222397 dt. 15-Feb-23	
Buyer's Order No.	Dated
SSMIET/012/22-23	24-May-22
Dispatch Doc No.	Delivery Note Date
Dispatched through	Destination
COURIER	
Terms of Delivery	

Sl No.	Description of Goods	HSN/SAC	CGST Rate	Quantity	Rate per	Amount
1	IPOL HYDROPAC PREMIUM 68 SC	2710	18 %	52 ltr	188.00 ltr	9,776.00
3	Mobil Oil Cut 100	27101989	18 %	20 ltr	250.00 ltr	5,000.00
	BT-30 TOOL HOLDER KIT 1)ER 32 WCC/AD/ER32-76/BT30-4 NOS 2)ER 25 WCC/AD/ER25-76/BT30-2 NOS 3)WSMH-AD/22-40/BT30-1 NO 4)WSMH-AD/32-50/BT30-1 NO 5)WSLH/16-63/BT30-1 NO 6)WSLH/20-63/BT30-1 NO 7)ER 25-1 NO 8)ER 32- 1 NO	8466	18 %	1 SET	19,996.00 SET	19,996.00
4	Drill Chuck	84669310	18 %	1 NOS	4,500.00 NOS	4,500.00
	Total					₹ 46,341.00
	Amount Chargeable (in words)					E. & O.E

Indian Rupees Forty Six Thousand Three Hundred Forty One Only

Taxable Value	Central Tax		State Tax		Total Tax Amount
	Rate	Amount	Rate	Amount	
39,272.00	9%	3,534.48	9%	3,534.48	7,068.96
Total: 39,272.00		3,534.48		3,534.48	7,068.96

Tax Amount (in words) : Indian Rupees Seven Thousand Sixty Eight and Ninety Six paise Only

Company's PAN : AAHFT8803B

Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

Customer's Seal and Signature

Company's Bank Details
 A/c Holder's Name: TRICHY MACHINE TOOLS
 Bank Name: KARUR VYSYA BANK
 A/c No.: 1661135000000727
 Branch & IFSC Code: KARUMANDAPAM & KVBL0001661
 for TRICHY MACHINE TOOLS

Prepared by SUBJECT TO TRICHY JURISDICTION
 Verified by Authorised Signatory
 This is a Computer Generated Invoice

D.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
 Principal
 SSM Institute of Engineering and Technology
 Kuttathupatti Village, Sindalagundu (Po),
 Palani Road, Dindigul - 624 002.

28/04/23

Dr.K.A.SUNDARAM, M.E., Ph.D.
 Associate Professor,
 Department of Mechanical Engineering,
 SM Institute of Engineering and Technology,
 Sindalagundu (PO), Dindigul - 624002.

DR. K. A. SUNDARAM

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
 Principal
 SSM Institute of Engineering and Technology
 Kuttathupatti Village, Sindalagundu (Po),
 Palani Road, Dindigul - 624 002.



FORMAT FOR GENERAL FINANCIAL RULES

(FORM GFR- 19)

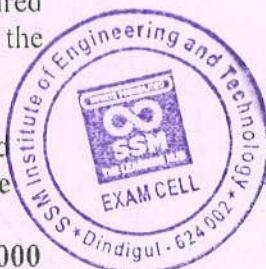
Assets acquired wholly or substantially out of Government grants

Register maintained by grantee institution

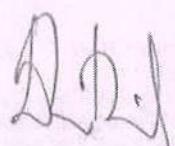
Block Account maintained by sanctioning authorities

Name of Sanctioning Authority

1. Serial No. : **AICTE/RPS/01/2022**
2. Name of grantee institution : **SSM Institute Engineering and Technology**
3. No. and date of sanction : **8-107/FDC/RPS/POLICY-1/2021-22 and 11.03.2022**
4. Amount of the sanctioned grant : **Rs. 17,96,780**
5. Brief purpose of the grant : **conduct of project titled "Development of Vibration Free Milling Fixture using Machine Learning and IoT" under Research Promotion Scheme.**
6. Whether any condition(s) regarding the right of ownership of Government in the property or other assets acquired out of the grant was incorporated in the grant-in-aid sanction : **No**
7. Particulars of assets actually credited or acquired : **CNC Milling Machine**
8. Value of the assets as on: **Rs.15,93,000**
9. Purpose for which utilized at present: **Conduct of research project approved by AICTE**
10. Encumbered or not: **No**
11. Reasons if encumbered: **Not applicable**
12. Disposed of or not: **No**
13. Reasons and authority, if any, for disposal : **Not Applicable**
14. Amount realized on disposal: **Not Applicable**
15. Remarks: **Nil**




Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (MUS),
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.



Registrar/Director/Principal
(Signature & Seal)
Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (MUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),



SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL-2

1

Name of the Equipment: CNC milling machine Drill tap machining center

S.No.	Date of Receipt	Name & Address of the Supplier (with Phone No., Cell No. & E-mail Id)	Bill No. & Date	Unit Price				Quantity Received	Grand Total Rs.	Signature		
				Rs.	P.	VAT/Sales Tax	Total			Tech. Asst.	Lab Incharge	HOD Principal Remarks
1	20.12.22	ACE Manufacturing Systems Ltd. Plot Nos: 467 - 469 12th Cross, 4th Phase, Pandy Industrial Area. Bangalore - 560058 Tel: 080- 41828100	2211 0040 332						1593000 - 1	15,93,000 -	Dr. K. SUNDARAMAN, M.E., Ph.D., PUS	Principal



Dr. K. SUNDARAMAN, M.E., Ph.D., PUS
Associate Professor,
Department of Mechanical Engineering
SSM Institute of Engineering and Technology
Sindalagundu (PO), Dindigul - 624002.

08/04/23

Dr. D. SENTHIL KUMARAN, M.E., Ph.D., PUS
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (PO),
Palani Road, Dindigul - 624002.

AJ

DR

Dr. D. SENTHIL KUMARAN, M.E., Ph.D., PUS
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (PO),
Palani Road, Dindigul - 624002.

**SSM INSTITUTE OF ENGINEERING
CONSUMABLE STOCK**

**AND TECHNOLOGY, DINDIGUL-2.
REGISTER**



DEPARTMENT : Mechanical Engineering.

LABORATORY : Research Lab

Sl. No.	Description	ITEM NAME			ITEM NAME						
		IPOL	HYDRO PAC	PREMIUM							

Sl. No.	Description	Bill No & Date	Rate / Unit	Qty Received	Total Amount	Issued Quantity	Balance Quantity	Technical Assistant	Lab - In Charge (P.G.)	HoD	Remarks / Location
1. 23-2-23	TRICYCLE MACHINE TOOLS	TMT /ECO									
	Ground floor, A Block,	2.2.2397									
	TIDITTSIS Building	2	128	52	64	977.60					
	SINDCO Complex	15.02.23				1780.00 (8% GST)					
	Industrial Estab.										
	Trichy, 620010										
	Tamilnadu										



28/04/2023

Dr.K.A.SUNDARARAMAN, M.E., Ph.D.,
Associate Professor,
Department of Mechanical Engineering,
SSM Institute of Engineering and Technology,
Sindalagundu (PO), Dindigul - 624002.

Dr.D.SENTHIL KUMARAN, M.B., Ph.D., MUS.,
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Palani Road, Dindigul - 624002.

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**SSM INSTITUTE OF ENGINEERING
CONSUMABLE STOCK**

AND TECHNOLOGY, DINDIGUL-2.
REGISTER

DEPARTMENT: Mechanical | ENGINEERING LABORATORY : Research Lab

S. No.	Date	Description	Bill No & Date	Rate / Unit	Qty Received	Total Amount
1.	23-2-23	TRICHY MACHINE TOOLS Ground floor, A Block, TIDBITSIA Building, SINCA Complex,	TNT/ESO 222397			
		Industrial Estate, Trichy, ₹2000	A	250	20146	5000.00
		Tamilnadu,			+ 15-02-23	900.00 (187. GST)
						=5900.00

D.E.K.A.SUNDARAM, M.E., Ph.D.
Associate Professor,
Department of Mechanical Engineering
SSM Institute of Engineering and Technology,
Sindalagundi (PO), Dindigul - 624092.



ITEM NAME Mobil Oil cut 100

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
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Kuttampatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.

**SSM INSTITUTE OF ENGINEERING
CONSUMABLE STOCK**

**AND TECHNOLOGY, DIN DIGUL-2.
REGISTER**

3

DEPARTMENT Mechanical Engineering

LABORATORY Research Lab

Sl No	Date	Description	Bill No & Date	Rate / Unit:	Qt Received	Total Amount
1. 23-2-23		TRICHY MACHINE TOOLS	TMT/ECO			
		Ground Floor, A Block -	2022.3.9.7			
		TIDITSSA Building	2	19996	1.30+	19,996.00
		SIDCO Complex,	(3.02.23	3599.00		
		Industrial Estate,		CGV. GST)		
		Tirichy - 620010.				= 23,595.00
		Tamilnadu.				

Dr.K.A.SUNDARAMAN, M.E, Ph.D.,
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28/02/23



28/02/23
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SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.



ITEM NAME BT-30 TOOL HOLDER, KIT

ITEM NAME BT-30 TOOL HOLDER, KIT	ISSUED QUANTITY	BALANCE QUANTITY	TECHNICAL ASSISTANT	LAB - IN-CHARGE (P.T.)	HOD	REMARKS / LOCATION
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28/02/23
Dr.D.SENTHIL KUMARAN, M.E, Ph.D., MUS.
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.

P.T. : Dr.D.SENTHIL KUMARAN

28/02/23

P.T. : Dr.D.SENTHIL KUMARAN



**SSM INSTITUTE OF ENGINEERING
CONSUMABLE STOCK**

DEPARTMENT OF MECHANICAL ENGINEERING LABORATORY RESEARCH LAB

CONSUMABLE STOCK

LABORATORY : Research lab

ITEM NAME Drill buck

**AND TECHNOLOGY, DINDIGUL-2.
REGISTER**

Sl No.	Date	Description	Bill No & Date	Rate / Unit	Qty Received	Total Amount
1.	23.2.23	TRICITY MACHINE TOOLS Ground Floor, A Block TIDISSIA Building Siddo Complex, Industrial Estate Trichy - 620010	TMT/ 500 222897 R 15.02.23		1	4500.00 +
		Tamil Nadu				810.00
						18% GST
						25310.00

08/28/04 23

DR.K.A.SUNDARAMAN, M.E, Ph.D.,
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Palani Road, Dindigul - 624 002.**

ITEM NAME	Detail	Chuck.						Remarks / Location
Issued Quantity		Balance Quantity		Technical Assistant	Lab - In Charge (P.T.)	HoD		

2010 medium of exchange
concrete block
secular
YUGO TECHNOLOGY

international standard
ISO 9001

international standard
ISO 9001

international standard
ISO 9001