ESTD 1995

SHADAN COLLEGE OF ENGINEERING & TECHNOLOGY

Established by SHADAN EDUCATIONAL SOCIETY.
Approved by A.I.C.T.E and Affiliated to JNTUH, Hyderabad.
Website: www.scet.in E-Mail: scet_shadan@yahoo.co.uk

Date: _____

DEPARTMENT OF MECHANICAL ENGINEERING

3.3.2. Number of research papers per teacher in the journals verified on UGC website during the last five years.

HEI Input:

2019-20	2018-19	2017-18	2016-17	2015-16
18	14	8	7	6

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College Code: 08

Shadan College of Engineering & Technology College Code: 08 Hyderabad-86, T.S. Peeran Cheru

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	MR. Mirza Shoeb Ahmed		CFD ANALYSIS OF SOLAR ABSORBER PLATE	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
2	Abdul Rahman		EXPERIMENTAL INVESTIGATION OF PRESSURE DROP CHARACTERISTICS ACROSS RECTANGULAR CHANNEL USING DETACHED RIBS	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
3	Mr. Asfan mohiuddin		STUDY OF ERECTION SEQUENCE OPERATIONS OF A BOILER IN THERMAL POWER PLANT	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
4	Mr.P Bhagavan Rao		CFD ANALYSIS OF SOLAR ABSORBER PLATE	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
5	Mr. D. Dinesh Yadav		PERFORMANCE ANALYSIS OF SOLAR FLA1 PLATE COLLECTOR	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
6	Mr. Syed Salman		STUDY OF ERECTION SEQUENCE OPERATIONS OF A BOILER IN THERMAL POWER PLANT	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
7	Ravinder Nilanker		ANALYSIS AND DESIGN OF BUILDING WITH SHEAR WALL USING STAAD PRO	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES

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8	Mr. Mohd Sohail		REMOTE CONTROLLED MECHATRONICS SYSTEM	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
9	Dr. Naseeb Khan		DESIGN AND FINITE ELEMENT ANALYSIS OF MISSILE CANISTER	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
10	Mr. K. Venkatesh		REMOTE CONTROLLED MECHATRONICS SYSTEM	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
11	Mr. Mohammad nayeem		STUDY OF ERECTION SEQUENCE OPERATIONS OF A BOILER IN THERMAL POWER PLANT	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
12	Dr. Subbaraju		DESIGN AND FINITE ELEMENT ANALYSIS OF MISSILE CANISTER	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
13	K.Venkatesh		ANALYSIS AND DESIGN OF BUILDING WITH SHEAR WALL USING STAAD.PRO	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
14	Mr. Sd khaja naimuddin		CFD ANALYSIS OF SOLAR ABSORBER PLATE	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES

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15	Mr. Syed Salman		PERFORMANCE ANALYSIS OF SOLAR FLAT PLATE COLLECTOR	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
16	Dr. A. Thillaivanan		DESIGN AND FINITE ELEMENT ANALYSIS OF MISSILE CANISTER	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
17	Mr. Ravinder nilanker		REMOTE CONTROLLED MECHATRONICS SYSTEM	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
18	Mirza Shoeb Ahmed		ANALYSIS AND DESIGN OF BUILDING WITH SHEAR WALL USING STAAD.PRO	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
19	Mr. Abdul Rahman		STUDY OF ERECTION SEQUENCE OPERATIONS OF A BOILER IN THERMAL POWER PLANT	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
20	Mohd Sohail		ANALYSIS AND DESIGN OF BUILDING WITH SHEAR WALL USING STAAD.PRO	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
21	Mr. Mohd Mohiuddin		HYBRID POWER GENERATION USING SOLAR PANEL AND WIND MILL	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES

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22	Mr. A. Abdullah aafaq		CFD ANALYSIS OF SOLAR ABSORBER PLATE	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
23	Mr. Mohammad Nayeem		PERFORMANCE ANALYSIS OF SOLAR FLAT PLATE COLLECTOR	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
24	Mr. Gona Yamaiah		HYBRID POWER GENERATION USING SOLAR PANEL AND WIND MILL	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
25	Dr. Afroz Mehar		DESIGN AND FINITE ELEMENT ANALYSIS OF MISSILE CANISTER	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
26	Mr. S. Rahamthulla		HYBRID POWER GENERATION USING SOLAR PANEL AND WIND MILL	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
27	Mr. Mohd Habeeb Ali		REMOTE CONTROLLED MECHATRONICS SYSTEM	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES
28	Mr. Sd Khaja Naimuddin		HYBRID POWER GENERATION USING SOLAR PANEL AND WIND MILL	INTERNATIONAL CONFERENCE ON TRANSFORMATIONAL EXCEL LENCE IN ENGINEERING, SCIENCES AND MANAGEMENT (ICTEESM2020)	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2019-2020	2456-172X	shadan college of engineering & rechnology	IRJGES

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Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	Mr.T.Naganna Rao		EXPERIMENTAL STUDY AND THE EFFECT OF ALKALI TREATMENT WITH TIME ON JUTE POLYESTER COMPOSITES	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
2	Dr. T.Shrihari		DESIGN AND 3D PRINTING OF FOOT AND ANKLEFOOT ORTHOSES	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
3	Mr. Ravi Prakash		AN OVERVIEW OF JOINING OF AL AND ITS ALLOYS BY FUSION AND SOLID-STATE WELDING PROCESSES	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
4	Mr. D.Mallesh		CALCULATION OF SPECIFIC ENERGY IN BARE AND TBC COATED SUPER ALLOYS	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
5	Mr. Raghu		DESIGN & DEVELOPMENT OF FRP SANDWICH CRASH BUMPER FOR ENHANCED SAFETY	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
6	Mirza Shoeb Ahmed Baig		INVESTIGATION ON PERFORMANCE OF BURNISHING PROCESS ON DIFFERENT MATERIALS	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
7	Mr. A. Abdullah Aafaq		EXPERIMENTAL INVESTIGATION OF AIR FLOW CHARACTERISTICS IN RECTANGULAR CHANNEL USING PEDESTALS AS VORTEX GENERATOR	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
8	Mr. Nayeemuddin		EXPERIMENTAL STUDY AND THE EFFECT OF ALKALI TREATMENT WITH TIME ON JUTE POLYESTER COMPOSITES	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
9	Mr. Naseeb Khan		DESIGN AND 3D PRINTING OF FOOT AND ANKLEFOOT ORTHOSES	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES

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10	Mr. Mudassir		AN OVERVIEW OF JOINING OF AL AND ITS ALLOYS BY FUSION AND SOLID-STATE WELDING PROCESSES	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
11	N. Ravinder		CALCULATION OF SPECIFIC ENERGY IN BARE AND TBC COATED SUPER ALLOYS	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
12	Mirza Shoeb Ahmed Baig, 2Mr.N.Ravinder, 2Mr,Gona Yarraiah, 4Mr. T. Ramesh		INVESTIGATION ON PERFORMANCE OF BURNISHING PROCESS ON DIFFERENT MATERIALS	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
13	Mr. Asfan Mohiuddin		EXPERIMENTAL INVESTIGATION OF AIR FLOW CHARACTERISTICS IN RECTANGULAR CHANNEL USING PEDESTALS AS VORTEX GENERATOR	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
14	Mr. Mohd. Mohiuddin		EXPERIMENTAL STUDY AND THE EFFECT OF ALKALI TREATMENT WITH TIME ON JUTE POLYESTER COMPOSITES	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
15	Mr. Rahamthulla Khan		DESIGN AND 3D PRINTING OF FOOT AND ANKLEFOOT ORTHOSES	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
16	Mr. N. Raja Srikanth		AN OVERVIEW OF JOINING OF AL AND ITS ALLOYS BY FUSION AND SOLID-STATE WELDING PROCESSES	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
17	D.Karthik		CALCULATION OF SPECIFIC ENERGY IN BARE AND TBC COATED SUPER ALLOYS	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
18	Mr.SYED SALMAN QUADRI		DESIGN & DEVELOPMENT OF FRP SANDWICH CRASH BUMPER FOR ENHANCED SAFETY	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
19	Mr.N.Ravinder		INVESTIGATION ON PERFORMANCE OF BURNISHING PROCESS ON DIFFERENT MATERIALS	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES

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20	Mr. Mohd Habeeb Ali		EXPERIMENTAL INVESTIGATION OF AIR FLOW CHARACTERISTICS IN RECTANGULAR CHANNEL USING PEDESTALS AS VORTEX GENERATOR	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
21	Mr,Makdoom		DESIGN AND 3D PRINTING OF FOOT AND ANKLEFOOT ORTHOSES	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
22	Mr A.Abdullah Aafaq		CALCULATION OF SPECIFIC ENERGY IN BARE AND TBC COATED SUPER ALLOYS	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
23	Mr. Naseeb Khan		DESIGN & DEVELOPMENT OF FRP SANDWICH CRASH BUMPER FOR ENHANCED SAFETY	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
24	Mr. T. Ramesh		INVESTIGATION ON PERFORMANCE OF BURNISHING PROCESS ON DIFFERENT MATERIALS	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
25	Mr. Md Siddique		EXPERIMENTAL INVESTIGATION OF AIR FLOW CHARACTERISTICS IN RECTANGULAR CHANNEL USING PEDESTALS AS VORTEX GENERATOR	INTERNATIONAL CONFERENCE ON RECENT ISSUES IN ENGINEERING SCIENCES AND MANAGEMENT	INTERNATIONAL RESEARCH JOURNAL IN G LOBAL ENGINEERING AND SCIENCES (IRJGES)	International	2018-2019	2456-172X	shadan college of engineering & technology	IRJGES
26	Dr.Afroz Mehar		*"Performance Analysis of Ply Orientation in Composite Laminates"*	6th International Conference on Materials Processing and Characterization	Elsevier Materials Today: Proceedings Volume5, 2018	International	2018		SCET	6th International Conference on Materials Processing and Characterization

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1	Mr.T.Nagaruna Rao		EXPERIMENTAL STUDY AND THE EFFECT OF ALKALI TREATMENT WITH TIME ON JUTE POLYESTER COMPOSITES	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND MANAGEMENT	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND AUTOMOBILE ENGINEERING	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
2	Dr. T.Shrihari		FRICTION STIR WELDING OF DISSIMILAR AA2014 AND AA6061 ALUMINIUM ALLOYS	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
3	Mr. Mohd. Mohiuddin		DESIGNING THE HVAC SYSTEM FOR A SHOPPING MALL	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
4	Mr. Nayeemuddin		EXPERIMENTAL STUDY AND THE EFFECT OF ALKALI TREATMENT WITH TIME ON JUTE POLYESTER COMPOSITES	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
5	Mr. D. Dinesh Yadav		FRICTION STIR WELDING OF DISSIMILAR AA2014 AND AA6061 ALUMINIUM ALLOYS	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
6	Mr. Rhamathulla Khan		DESIGNING THE HVAC SYSTEM FOR A SHOPPING MALL	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
7	IMr. Mudassir		EXPERIMENTAL DETERMINATION OF OPTIMAL PROCESS PARAMETERS OF FRICTION WELDED JOINTS OF DISSIMILAR MATERIAL BY USING	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
8	Mr. Mohd. Mohiuddin		EXPERIMENTAL STUDY AND THE EFFECT OF ALKALI TREATMENT WITH TIME ON JUTE POLYESTER COMPOSITES	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
9	Mr.T.Nagaruna Rao		FRICTION STIR WELDING OF DISSIMILAR AA2014 AND AA6061 ALUMINIUM ALLOYS	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
10	Mr. AAFAQ		DESIGNING THE HVAC SYSTEM FOR A SHOPPING MALL	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
11	Mr.T.Srihari		EXPERIMENTAL DETERMINATION OF OPTIMAL PROCESS PARAMETERS OF FRICTION WELDED JOINTS OF DISSIMILAR MATERIAL BY USING	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
12	Mrs. Prema Jyothi		INVESTIGATION OF OPTIMUM STACKING SEQUENCE IN GLASS FIBER REINFORCED POLYMER STRUCTURES USING CLASSICAL	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
13	Neela Raja Srikanth		DIFFERENT MODELS FOR ZNO NANOTUBE BASED PHOTOELECTRODES FOR DYE-SENSITIZED SOLAR CELLS: A REVIEW	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE

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14	Mr.AZEEM		DESIGNING THE HVAC SYSTEM FOR A SHOPPING MALL	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
15	Mr.Ahmed khan		EXPERIMENTAL DETERMINATION OF OPTIMAL PROCESS PARAMETERS OF FRICTION WELDED JOINTS OF DISSIMILAR MATERIAL BY USING	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
16	2 Mr. Dilip Reddy		INVESTIGATION OF OPTIMUM STACKING SEQUENCE IN GLASS FIBER REINFORCED POLYMER STRUCTURES USING CLASSICAL	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
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18	Mr. Rahamthulla Khan		INVESTIGATION OF OPTIMUM STACKING SEQUENCE IN GLASS FIBER REINFORCED POLYMER STRUCTURES USING CLASSICAL	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
19	Zahed		DIFFERENT MODELS FOR ZNO NANOTUBE BASED PHOTOELECTRODES FOR DYE-SENSITIZED SOLAR CELLS: A REVIEW	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
20	Mr. T.RAMESH		INVESTIGATION OF OPTIMUM STACKING SEQUENCE IN GLASS FIBER REINFORCED POLYMER STRUCTURES USING CLASSICAL	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
21	Naseeb Khan		DIFFERENT MODELS FOR ZNO NANOTUBE BASED PHOTOELECTRODES FOR DYE-SENSITIZED SOLAR CELLS: A REVIEW	INTERNATIONAL CONFERENCESON CONTEMPORARY ISSUES IN ENGINEERING AND	INTERNATIONAL JOURNALS OF RESEARCH IN MECHANICAL MECHATRONICS AND	linternational	2017-2018	2454-1435	Shadan College of Engineering and Technology	IJRMMAE
22	Dr Naseeb Khan		Design Analysis and Experimental Evaluation of Sandwich Composites Subjected to Fatigue		ICRIEAT	International	2017	ISBN 978-93-86647-85-6	SCET	ICRIEAT
23	Mr.Syed Salman Mohiuddin Quadri		Design Analysis and Experimental Evaluation of Sandwich Composites Subjected to Fatigue		ICRIEAT	International	2017	ISBN 978-93-86647-85-6	SCET	ICRIEAT
24	Mr.Mirza Shoeb Ahmed Baig		Design Analysis and Experimental Evaluation of Sandwich Composites Subjected to Fatigue		ICRIEAT	International	2017	ISBN 978-93-86647-85-6	SCET	ICRIEAT

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1	Dr.Naseeb Khan		A Review on Optimisation of Performance and Emission characteristics of C.I Engine Operated on Bio-Diesel Fuel Using Taguchi Method"	International conference on Recent Innovations in Mechanical Engineering (ICRIEAT-2016)	International conference on Recent Innovations in Mechanical Engineering (ICRIEAT-2016)	international	2016	ISBN: 978-1-5396-2645-9	Erode Sengunthar Engineering College, Erode	ICRIEAT
2	Dr.Naseeb Khan		"Experimental Investigation of the Suitability of Hydrogen with Cottonseed Oil as Alternate Fuel for IC Engines: A Review"	6th National conference on Advances in Mechanical Engineering (AIM-2016),	Under TEQIP-II, Vasavi Engineering College (Autonomous), Hyderabad, T.S.	National	2016	ISBN: 57978-93-82570-82-0,	SCET	AIM
3	Dr.Afroz Mehar		"Investigation of Optimum stacking sequence in glass fiber Reinforced polymer Structures using classical laminate Theory",	International Conference on Technological Innovations in Mechanical Engineering (TIME-2016)held on 10th - 11th Feb 2016	organized by CBIT and IRD, India	International	2016		SCET	TIME
4	Dr.Afroz Mehar		"Dynamic Analysis of Composite Lamina",	International Conference on Paradigms in Engineering and Technology (ICPET 2016).	Held at Hyderabad, India on 2nd and 3rd March 2016.	International	2016		SCET	ICPET
5	Dr.Afroz Mehar		"Buckling Analysis of a Carbon/Epoxy Orthotropic Cylindrical shell"	International Conference on Paradigms in Engineering and Technology (ICPET 2016).	Held at Hyderabad, India on 2nd and 3rd March 2016.	International	2016		SCET	ICPET
6	Dr.Afroz Mehar		"Finite Element Analysis Of Orthotropic Cylindrical Shell Subjected To Axial Compression And Tension"	International Conference On Recent Innovations In Engineering And Technology (ICRIET-2K16),	Held at Hyderabad, India on 22nd and 23rd Dec, 2016.	International	2016		SCET	ICRIET
7	Dr.Afroz Mehar		"Investigation of Optimum stacking sequence in glass fiber Reinforced polymer Structures using classical laminate Theory",	International Conference on Technological Innovations in Mechanical Engineering (TIME-2016),	held on 10th -11th Feb 2016, organized by CBIT and IRD, India	International	2016		MJIT	TIME
8	Mr.Raja Srikanth		Evolution of Optimal Design Congiguration of Leaf Spring for Automotive Application	Global Colloquium in Recent and Effectual Researches in Engineering,Science and Technology (RAEREST)		National	2016		SWEC&T	RAEREST
9	Mr.Raja Srikanth		Effect of Functionalized MWCNTs on the Mechanical Properties Of Polymers Matrices	Effect of Functionalized MWCNTs on the Mechanical Properties Of Polymers Matrices	JNTU H	National	2016		SWEC&T	JNTU H

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1	Dr.Afroz Mehar		"Experimental analysis of orthotropic cylindrical shell subjected to internal Pressure"	International Conference on theoretical and Applied Research in Mechanical Engineering (ICTARME)	held on 18th Jan 2015 at Hyderabad.	international	2015		SCET	ICTARME
2	Dr.Afroz Mehar		"Performance Analysis of Solar Flat Plate Collector"	Third International Conference of IRF, on 07th March-2015, Mysore, India	IRF	international	2015	ISBN: 978-93-82702-74-0.	MJIT	Third International Conference of IRF
3	Dr.Afroz Mehar		"Experimental Investigation and FE Analysis of CFRP Composites",	4th International Conference on Materials Processing and Characterization	Elsevier Materials Today: Proceedings Volume2, Issues 4–5, 2015	international	2015		SCET	4th International Conference on Materials Processing and Characterization
4	Dr. M.Subburaj		Quality in Education – an overview of outcome based assessment of teaching learning process by NBA"	International conference on quality through innovation, 19,Feb,2015	Anna University, Chennai.	international	2015		SCET	ICQTI
5	Dr. M.Subburaj		The welfare measures for the transformation of higher education in Tamilnadu, India"	12 th International N.E.W.S conference, May 15-18, 2015	Tribhuvan university, Kathmandu, Nepal.	international	2015		SCET	12 th International N.E.W.S. conference,

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ANALYSIS OF VEHICLE SUSPENSION SYSTEM SUBJECTED TO FORCED VIBRATION USING MAT LAB/SIMULINK

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ABSTRACT

A safe vehicle must be able to stop and maneuver over a wide range of road conditions. Good contact between the tires and the road will able to stop and maneuver quickly and it is achieved by vehicle suspension system. Suspension is the term given to the system of springs, shock absorbers and linkages that connects a vehicle to its wheels. Shock absorber is an important part of automotive suspension system which has an effect on ride characteristics. Shock absorbers are also critical fortire to road contact which to reduce the tendency of a tire to lift off the road. This affects braking, steering, cornering and overall stability. The removal of the shock absorber from suspension can cause the vehicle bounce up and down. It is possible for the vehicle to be driven, but if the suspension drops from the driving over a severe bump, the rear spring can fall out. The main role of a suspension engineer is to tune the suspension in such a way as to maximize the road holding performance of the vehicle. One of the more difficult components in achieving this is the selection of the dampers which was done empirically in the past. This paper outlines the development of the equations of motion for some simple vehicle models and demonstrates how the increasing availability of numerical simulation software's MATLAB could be used to solve these equations to optimize the vehicle before it arrives at the road.

1. Introduction

Suspension systems have been widely applied to vehicles, from the horse-drawn carriage with flexible leaf springs fixed in the four corners, to the modern automobile with complex control algorithms. The suspension of a road vehicle is usually designed with two objectives; to isolate the vehicle body from road irregularities and to maintain contact of the

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CHARACTERIZATION AND MECHANICAL BEHAVIOR OF COMPOSITE MATERIAL USING FEA

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Abstract: Composites have been used extensively in applications such as pipes and pressure vessels. Therefore there is need for further studies on the physical and mechanical properties of these materials. In the present work composite laminates made of glass fiber and epoxy resin are tested to find the strength of the laminate and also its mechanical properties. By using FEA (Ansys 11.0) the optimum helix angle is determined for the composite material
Key words: Fiber Reinforced Polymers, Finite Element Analysis, Glass Fiber, Epoxy Resin.

1. INTRODUCTION

Mankind has been aware composite materials since several hundred years and applied innovation to improve the quality of life. Although it is not clear has to how Man understood the fact that mud bricks made sturdier houses if lined with straw, he used them to make buildings that lasted. Ancient Pharaohs made their slaves use bricks with to straw to enhance the structural integrity of their buildings, some of which testify to wisdom of the dead civilization even today.

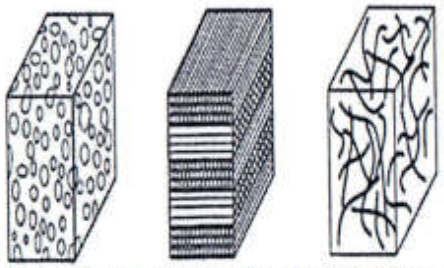

Figure 1.1 classifies layers and fibers in composite materials.

Particulate composite Laminated composite Fiber reinforced composite

1.1 Manufacturing Method - Hand Lay-Up And Spray-Up

Hand lay-up is a simple method for composite production. A mold must be used for hand lay-up parts unless the composite is to be joined directly to another structure. The mold can be as simple as a flat sheet or have infinite curves and edges. For some shapes,molds must be joined in sections so they can be taken apart for part removal after curing. Before lay-up, the mold is prepared with a release agent to insure that the part will not adhere to the mold. Reinforcement fibers can be cut and laid in the mold. It is up to the designer to organize the type, amount and direction of the fibers being used. Resin must then be catalyzed and added to the fibers. A brush, roller or squeegee can be used to impregnate the fibers with the resin. The lay-up technician is responsible for controlling the amount of resin and the quality of saturation. The basic process of hand lay-up is shown in fig 2.1. Other fabrication processes such as vacuum resin transfer molding and compression molding can be used with hand lay-up to improve the quality of the finished part or save.

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DEVELOPING PART PROGRAMMING AND DESIGNING AND ANALYSIS OF COMPLEX DISC BRAKE ROTOR USING (UNIGRAPHICS)

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Abstract : The project work aims Modeling ,Analysis and Manufacturing of a complex disc brake rotor Modeling by using Unigraphics soft ware.Analysis by ANSYS Software and Manufacturing by CNC vertical machining centre by developing a part program the part program developed by using G- Codes and M-Codes .The machining model is carried out in CNC Vertical Machining Centre.

NX is one of the world's most advanced and tightly integrated CAD/CAM/CAE product development solution. Spanning the entire range of product development, NX delivers immense value to enterprises of all sizes. It simplifies complex product designs, thus speeding up the process of introducing products to the market.

The NX software integrates knowledge-based principles, industrial design, geometric modeling, advanced analysis, graphic simulation, and concurrent engineering. The software has powerful hybrid modeling capabilities by integrating constraint-based feature modeling and explicit geometric modeling. In addition to modeling standard geometry parts, it allows the user to design complex free-form shapes such as airfoils and manifolds. It also merges solid and surface modeling techniques into one powerful tool set.

Ansys develops and markets engineering simulation software for use across the product life cycle. Ansys Mechanical finite element analysis software is used to simulate computer models of structures, electronics, or machine components for analyzing strength, toughness, elasticity, temperature distribution, electromagnetism, fluid flow, and other attributes.we use ansys workbench 17.2 .

The disc brake is a device for slowing or stopping the rotation of wheel. Brake converts the friction into heat if brake to hot they will expose to large thermal stress during rotation of braking. Brake is a mechanical device is used to stop or slowing of vehicle during the motion.

1. INTRODUCTION OF DISC BRAKE

1.0 Introduction:

Brake is a device by means of artificial frictional resistance applied to moving machine member In order to stop the motion of vehicle .the energy obsorbed by brakes is dissipated in the form of heat . The heat is dissipated in the form of atmosphere.

1.1 Principles Of Braking System :

When brakes are applied, hydraulically actuated pistons move the friction pads into contact with the disc applying equal and opposite forces on the disc. Due to the friction in between disc and pad surfaces, the kinetic energy of the rotating wheel is converted into heat which vehicle is to stop after a certain distance.

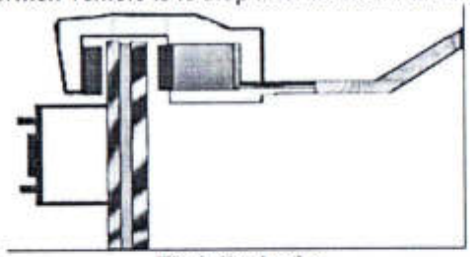

Fig 1 disc brake

1.2 Disk Brake

Ever since the invention of the wheel, if there has been "go" there has been a need for "whoa." As the level of technology of human transportation has increased, the mechanical devices used to slow down and stop vehicles has also become more complex. In this report I will discuss the history of vehicular braking technology and possible future developments. Before there was a "horse-less carriage," wagons, and other animal drawn vehicles relied on the

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EFFECT OF PROCESS PARAMETERS ON MATERIAL REMOVAL RATE IN WIRE ELECTRICAL DISCHARGE MACHINING

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ABSTRACT; Technologically advanced industries demand for materials having higher hardness and wear resistance. These materials are difficult to machine using traditional methods. Hence,nontraditional methods such as electric discharge machining and wire electric discharge machining are applied. Wire EDM is capable of machining complex shapes in hard materials. The technology on which WEDM works is conventional electro discharge sparking phenomenon widely accepted and implemented for industrial application. Wire EDM has been employed for making dies, press tools and electrodes.In this project work, the effect of process parameters on material removal ratein WEDM like pulse on time, pulse off time and peak current has been investigated to reveal their impact on material removal rate of STAINLESS STEEL 304,ALUMINIUM and BRASS.During this work, it is tried to investigate the effect of one variable at a time.

The machine used for experimental work was electronica make wire EDM. Brass wire is used as electrode and deionized water is used as dielectric medium. The specimens of SS 304,ALUMINIUM and BRASS of required dimensions were prepared by milling. Number of experiments were conducted to find out the effect of input parameter on output parameter. The output parameter is material removal rate. The change in output parameter due to change in input parameter is measured every time. It is observed that the material removal rate increases with increase in pule on time and peak current, whiledecreases with increase in pulse off time

1. INTRODUCTION

Manufacturing industry is becoming even more conscious about time and quality with respect to the demand, efficiency, global acceptance and competence, also the need to use complicated and precise components having some special shape with high tolerances.

The conventical machining process, in spite of recent technical advancement, are inadequate to machine complex shapes in hard, high strength, temperature resistant alloys and die steels. Keeping these requirements into mind, a number of Non-traditional machining/unconventional machining processes have been developed. Nevertheless, such materials are difficult to be machined by traditional machining methods. Hence, non-traditional machining methods including Electrochemical machining, Ultrasonic machining, Electrical discharging machining (EDM) etc. are applied to machine such difficult to machine materials.

ELECTRICAL DISCHARGE MACHINING

Electrical discharge machining is also known as spark machining, spark eroding, die sinking, wire burning or wire erosion, is a manufacturing process whereby a desired shape is obtained by using electrical discharges. Material is removed from the work piece by a series of rapidly recurring current discharges between two electrodes, separated by a dielectric liquid subject to an electric voltage. One of the electrodes is called the tool electrode or simply the "tool" or "electrode", while the other is called the work piece electrode, or work piece, The process depends upon the tool and work piece not making actual contact.

2. LITERATURE REVIEW

Some selected resources papers have been discussed related the EDM and WEDM. The studies considered from these papers are mainly concerned with the WEDM parameters such as current, voltage, pulse on time, duty cycle etc., and how these effect the machining characteristics like MRR, SR etc.

- Tarng et al. (1995) developed a model using neural network and simulated annealing algorithm in order to predict and optimize the surface roughness and cutting speed of WEDM process in machining of SUS-304 stainless steel materials.
- Liao et al. (1997) investigated WEDM parameters in machining of SKD11 alloy steel using Taguchi quality design method and analysis of variance (ANOVA). Using regression analysis mathematical models relating to the machining performance namely MRR, SR and gap width with various machining parameters were developed.

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INVESTIGATIONS ON THE EFFECTS OF NANO-FLUID IN ELECTROCHEMICAL MACHINING OF INCONEL ALLOY 718 USING GREY-TAGUCHI APPROACH

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ABSTRACT

The Electrochemical micromachining (ECMM) is one of the most fruitful non-traditional micromachining processes to machine the intricate shapes, but the challenge to machine the micro hole in the hard materials like super alloys, titanium, stainless steel, etc. Machining of nickel-based super alloy, Inconel alloy 718 by traditional as well as non-traditional is very difficult because it has exhibit high resistance to corrosion and unique strength. Inconel alloy 718 is a wrought corrosion-resistant alloy. Hence, this research works investigate the effects of micro hole on Inconel alloy 718 by electrochemical micromachining. Experiments are conducted based on Taguchi's L27 orthogonal array with process parameters such as Voltage, electrolyte concentration, and feed rate. The developed ANOVA table proved the significances of influencing factors in obtaining the superior performance of radial overcut are generated to study the effect of input parameters.Finally, Scanning Electron Microscopy (SEM) images are used to study the effect of surface morphology.

Keywords: Electrochemical micromachining, Inconel alloy 718 , electrolyte concentration.

1. Introduction

With the present technologies, miniaturization components play a vital role in aerospace industries, electronic industries, and biomedical industries. Micro holes and micro slots are very challenging to machine in traditional machining technologies Nontraditional machining process has been mainly used to machine the miniaturization components with high accuracy [1].Nontraditional machining process such as electrical discharge micromachining have been applied with machining of nickel-based superalloys during recent days but with EDM process it has more tool wear and laser beam machining formation of the heat affected zone due to thermal effects [2].Electrochemical micromachining (ECMM) recommended using instead of EDM and LBM, due to its advantages such as smooth surfaces, less tool wear , stress free surface generation and capability to machine the hard and high strength materials[3]. Electrochemical machining process in which materials were removed by the mechanism of anodic dissolution of electrolyte process and it is non contact machining process and machining electrical conductivity

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MEASUREMENT OF BRAND AWARENESS AND BRAND PERCEPTION OF AUTOMOBILE COMPANY

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Abstract

Nowadays brands play significant role in our economy and culture. brands seen as "cultural accessories and personal philosophies". The process of creating brand is the value addition technique that shows an image of the commodity, corporation and the country generally. Considering the fact that many new car brands in the recent years are becoming well known in China, car industry is chosen to study the problem effectively. The purpose of this paper is to find out valuation models of brand equity for automotive sector. The fruits of research tell us, for building brand equity, the brand loyalty and brand preference plays significant role. The brand equity's elements should be logical in their conduct in order to be understood and valued the true image of the company by consumers. The study delivers factual results of factors of brand equity with particular implication for Chinese automobile market.

Keywords: Brand loyalty, Brand relationship, Brand equity, Chinese car industry

1. Introduction

Brands have become very important parts of our economy and culture, now brands are characterized as "cultural accessories and personal philosophies". Brand is a name or a trademark associated with a product or company.

It's a fact that brand often becomes a commitment. It's proved that brands can be value improvers and also shorten income. Every marketing specialist accepts the fact that brands can add significant value. Brand creating process is the value addition technique that shows an image of the product, the enterprise and the country generally.

Brand strategy supports businesses in reaching their planed performance. Topic of brand equity has got high consideration for research recently. The research of brand equity is becoming more and more common, as some marketing specialists concurred that brands are one of the worthiest assets a firms posses. Consequently, current marketing research tries to manage brand equity and conceptualise measure in a way that drives brand market performance and assists companies in making strategic decisions. The study brings out an experimental results of the factors of brand equity with particular implication in Chinese automobile sector.

Brand equity is a phrase used in the marketing industry which describes the value of having a well-known brand name, based on the idea that the owner of a well-known brand name can generate more money from products with that brand name than from products with a less well known name, as consumers believe that a product with a well-known name is better than products with less well known names (Aaker David A. 1991).

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DESIGN AND ANALYSIS OF TRAPEZOIDAL SHAPED CANTILEVER BEAM ALONG WITH AEROFOIL BLUNT BODY FOR VIBRO WIND

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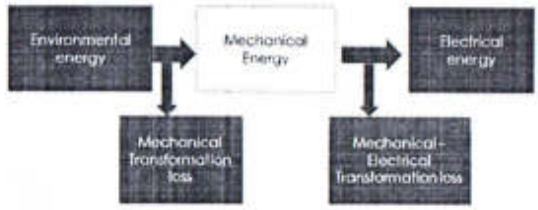
Abstract

The aim of this project is to convert vibration into electricity with help of piezo electric material. Here we are going to change the design of a blunt body and increase the frequency of produced vibrations. By increasing the vibration we can increase the electricity production. .By changing the shape of blunt body and cantilever beams we can improve the efficiency of the system

Introduction

Alternative fuels to reduce the consumption of fossil fuels. So here we are concentrating on the renewable energy resources, here vibro wind system is a new developing technology in renewable systems. In this vibro wind system mechanical energy (vibration source) can convert into electrical energy. This is a new developing technology now a day

In our project the mechanical energy (vibration) can be converted into useful electrical energy (electricity).Induced vibration can be produced by wind velocity which appears on different structures. We are using trapezoidal, conical and aerodynamic structure blunt body to produce induced vibration



Piezoelectric material

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Review Article

An Experimental Investigation of Magnetically Impelled Arc Butt Welding of Pipes: A Review

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Abstract

This paper describes a new development of circumferential welding of pipes. Circumferential butt welds are commonly used to join pipes in various industries, including power plants and automobile industries. Magnetically impelled arc butt welding process is a hybrid welding technique. It uses a rotating electric arc as its heat source and is known as efficient method for pipe welding. In this process heat is evolved prior to forging by an arc generated between two coaxially aligned pipes, this arc rapidly rotates along the circumferential edges of the pipes to be welded due to the electromagnetic force exerted by the interaction of arc current and magnetic field generated by the external magnetic system. The entire weld over the full joint thickness is made in one single operation, instead of using several passes as in conventional welding. The main emphasis of this review is to describe the different works carried out in the past which help full for providing the information for the future development of research work. Present study exposes the different works that has been done in the past for improving the weld quality.

Keywords: MIAB welding, Rotating Electric Arc, Upsetting and Magnetic flux.

1. Introduction

Magnetically impelled arc butt (MIAB) welding is a special electric arc welding process falls under the category of pressure welding method, which is used for welding of hollow circular sections.

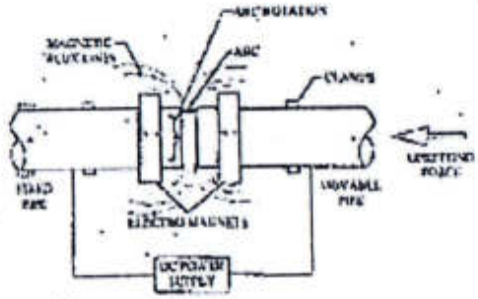

Fig.1 Schematic Diagram of MIAB Process

This process utilizes the rotating electric arc as a source of heat. In this process two tubes or pipe edges are well secured and clamped coaxially, one pipe is fixed and another pipe is movable. A magnetic field is generated either with permanent magnet or electromagnet is wound near butted edges of the pipe and DC arc is struck between the end of the pipes separated by a fixed small gap. The initiated arc on circumferential point will start rotating around the peripheral edges with a very high speed due to the interaction with radial magnetic field generated by magnets according to the Fleming's left hand rule. After the arc rotted for some time, both pipe ends will be heated up sufficiently, at the end heavy upset pressure is applied to get the welding.

The radial component of the magnetic flux density Br and the axial component of the welding arc current Ia interact with each other exerting a force on the arc. The mathematical expression of this electromagnetic force is given in equation (1). This force impels the arc along the peripheral edges of the tubes.

$$F_{ar} = K . Ia \times Br \quad (1)$$

Coefficient K depends on the value of the arc gap between the two tubes to be welded. The force exerted on the arc current influences the speed of the rotating arc. Therefore, it is clear that adjusting the strength of the magnetic field, the magnitude of the arc current, or the width of the arc by changing arc current plays an important role on the speed of arc. In particular, by sharply increasing the welding current for a short time just prior to upset, a rapid expulsion of molten metal occur which enables cleaning action.

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EXPERIMENTAL INVESTIGATIONS ON DIESEL ENGINE WITH BIO-DIESEL

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Abstract- Renewable fuels have played a significant role in the swift industrialization, transportation and agriculture of the planet. Due to the risk of supply crisis, effect of gas emissions and increase in prices of fossil fuels, there is urgent need to investigate the possibility of using renewable fuels. Biodiesel is one of the alternative fuels for replacing the diesel fuel. Karanja biodiesel is considered as one of the most prospective renewable energy sources of India. In the present work experimental investigations are carried out to evaluate the performance of single cylinder, four stroke, direct injection dual fuel, variable compression ratio engine with pure diesel, Karanja biodiesel(B5, B10, B15, B20)by varying load(25%, 50%, 75%, 100% load) and at rated speed 1500rpm. Initially the experiments are conducted with injection opening pressure 200 bar and at compression ratio of 17. The effects of various performance and emission parameters are computed. The Results obtained from experimental investigations are presented karanja biodiesel. The blends of karanja in the diesel under standard conditions have shown distinct performances at various loads, B20 has stood best of all the other blends with the brake thermal efficiency and BSFC equal to that of pure diesel

1. INTRODUCTION

The internal combustion engines have become an important part of the fulfilment of the human needs. Automotive propulsion, the supply of motion to the machinery heavy and decentralized power generation are the chief applications of internal combustion engines. The conventional running of internal combustion demands petroleum products such as Diesel, petrol, Gasoline etc., as fuels. The combustions products and the residues of the engine combustion allowed into the atmosphere are leaving adverse effects on the human health and the environment. Many types of research and are being conducted to find the solution for the reduction of the internal combustion engine pollutants. Biogas typically refers to a mixture of different gases produced by the breakdown of organic matter in the absence of oxygen. Biogas can be produced from raw materials such as agricultural waste, manure, municipal waste, plant material, sewage, green waste or food waste. Biogas is a renewable energy source and in many cases exerts a very small carbon footprint.

Biodiesel has viscosity close to diesel fuels. These esters contain 10 to 11% oxygen by weight, which may encourage more combustion than hydrocarbon based diesel fuels in an engine. Biodiesel has lower volumetric heating values (about 12%) than diesel fuels but has a high cetane number and flash point.Some of the enviable fuel properties of biodiesel derived from different vegetable oils are presented in Table.1. Due to rapid price increase in petroleum fuels, there is a growing demand for the search for sustainable, environment friendly and cost effective alternative substitute renewable fuel [2]. He found that VOs in order of decreasing OSI are Castor, Mahua, Neem, Karanja can berecommended as potential feed stocks for biodiesel production while other SVOs are not due to their instability but may require considerable effort to make the fuel stable. CP and CFPP of edible SVOs in decreasing order are found:Castor, Rape seed Soya bean while non-edible SVOs in decreasing order are Mahua, Neem, Karanja, Jatropha, Soybean indicating that there is a need to improve the cold flow properties using additives. Out of all SVOs the Castor oil has highest OSI and good cold flow properties and recommended as the best SVO for biodiesel production.

Fast pyrolysis of biomass is one of the most recent renewable energy processes to have been introduced [7]. Fast pyrolysis has now achieved a commercial success for production of chemicals and is being actively developed for producing liquid fuels. Bio-oils have been successfully tested in engines, turbines, and boilers, and have been upgraded to high-quality hydrocarbon fuels, although at a presently unacceptable energetic and financial cost. He reveals several aspects that in turn will serve as an aid for bio oilvalorization [3]. Such as, evaluating characterization techniques involved in understanding salient features of bio-oil, insight of bio-oil pre-treatment methods for water removal to increase heating values and decrease risk of catalyst poisoning in subsequent hydro processing, studies

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DESIGN & ANALYSIS OF COMPOSITE DRIVE SHAFT FOR AUTOMOBILE APPLICATIONS

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Abstract- The application of filament winding technology for the manufacturing of composite shaft is in widespread use in automobile & aerospace applications. These include composite drive shaft for car and composite rods for aircraft. Typically, composite drive shaftis designed using torque transmission capacity and torsional buckling capacity of the drive shaft.
In addition to that weight reduction taken as an objective function and the design variables such as Number of plies, thickness of ply and Stacking of sequence subjected to constraints namely Torque transmission of the capacity, Buckling torque capacity of the shaft. Since it is a single objective function with constraints is very difficult to optimize using conventional optimization techniques. Using FE Analysis Optimized the ply design and the results are calculated by using two different composite materials namely E-Glass /Epoxy, Carbon /Epoxy composite. 3D layered analyses of composite drive shaft have been performed to predict the behavior of the structure.It has been observed that the theoretical results are in close agreement with the finite element analysis results. Also, the design stresses were within safe limits.
Key words: Filament winding,Optimization, Composite drive shaft

1. INTRODUCTION

1.0 The advanced composite materials such as Graphite, Carbon, Kevlar and with suitable resins are widely used because of their high specific strength(strength/density) and high specific modulus (modulus/density) Advanced composite materials seem ideally suited for long, power driver shaft (propeller shaft) applications. Their elastic properties can be tailored to increase thetorque they can carry as well as the rotational speed at which they operate. The drive shafts are used in automotive, aircraft and aerospace applications. The automotive industry is exploiting composite material technology for structural components construction in order to obtain the reduction of theweight without decrease in vehicle quality and reliability. It is known that energy conservation is one of the most important objectives in vehicle design and reduction of weight is one of the most effective measures toobtain this result. Actually, there is almost a direct proportionality betweenthe weightof a vehicle and its fuel consumption, particularly in city driving

1.1 Description of the Problem:

Almost all automobiles (at least those which correspond to design with rear wheel drive and front engine installation) have transmission shafts. The weight reduction of the drive shaft can have a certain role in the general weight reduction of the vehicle and is a highly desirable goal, if it can be achieved without increase in cost and decrease in quality and reliability It is possibleto achieve design of composite drive shaft with less weight to increase the first natural frequency of the shaft and to decrease the bending stresses using various stacking sequences. By doing the same, maximize thetorque transmission and torsional buckling capabilities are also maximized.

1.2Aim and Scope

This work deals with the replacement of a conventional steel drive shaft with E-Glass/ Epoxy, High Strength Carbon/Epoxy and High Modulus Carbon/Epoxy composite drive shafts for an automobile application.

CHAPTER-2

2. BACKGROUND

2.0 Composites consist of two or more materials or material phases that are combined to produce a material that has superior properties to those of its individual constituents. The constituents are combined at a macroscopic level and or not soluble in each other. The main difference between composite and an alloy are constituent materials which are insoluble in each other and the individual constituents retain those properties in the case of composites, where as in alloys, constituent materials are soluble in each other and forms a new material which has different properties from their constituents.

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SUSTAINABILITY ANALYSIS ON METAL FILAMENT IN FUSION DEPOSIT METHOD (FDM)METHOD

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ABSTRACT

Polylactic acid (PLA) is an organic polymer commonly used in fused deposition (FDM) printing and biomedical scaffolding that is biocompatible and immunologically inert. However, variations in source material quality and chemistry make it necessary to characterize the filament and determine potential changes in chemistry occurring as a result of the FDM process. We used several spectroscopic techniques, including laser confocal microscopy, Fourier transform infrared (FTIR) spectroscopy and photoacousitc FTIR spectroscopy, Raman spectroscopy, and X-ray photoelectron spectroscopy (XPS) in order to characterize both the bulk and surface chemistry of the source material and printed samples. Scanning electron microscopy (SEM) and differential scanning calorimetry (DSC) were used to characterize morphology, cold crystallinity, and the glass transition and melting temperatures following printing. Analysis revealed calcium carbonate-based additives which were reacted with organic ligands and potentially trace metal impurities, both before and following printing. These additives became concentrated in voids in the printed structure. This finding is important for biomedical applications as carbonate will impact subsequent cell growth on printed tissue scaffolds. Results of chemical analysis also provided evidence of the hygroscopic nature of the source material and oxidation of the printed surface, and SEM imaging revealed micro- and submicron-scale roughness that will also impact potential applications.

1. Introduction

3D printing is an emerging technology that can be used to construct complex structures inexpensively for modeling, prototyping, or production through deposition or solidification. Fused deposition modeling (FDM) is a standard method for 3D printing using thermoplastic feedstock, in which heated extruders deposit material in patterns determined by translated computer-assisted design (CAD) files, and build up structures layer by layer [1].

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A REVIEW ON SPRING-BACK IN SHEET METAL V BENDING

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ABSTRACT

One of the major problems in sheet metal forming processes is the elastic recovery of sheet during unloading of punch, called spring-back, which affects the dimensional accuracy of the product. This phenomenon will affect by various parameter such as process parameter and material parameter, etc. This paper deals with a review on Spring-back in Sheet Metal V Bending Process for the various materials are CK67 steel, aluminum and stainless steel.

I. INTRODUCTION

The sheet metal forming process involves a combination of elastic–plastic bending and stretch deformation of the work piece. These deformations may lead to a large amount of spring-back of the formed part. It is desired to predict and reduce spring-back so that the final part dimensions can be controlled as much as possible.

One of the most common metal working operations is bending. This process is used not only to form parts such as flanges, seams etc. but also to impart stiffness to the part by increasing its moment of inertia. The terminology used in bending is shown in figure 1.

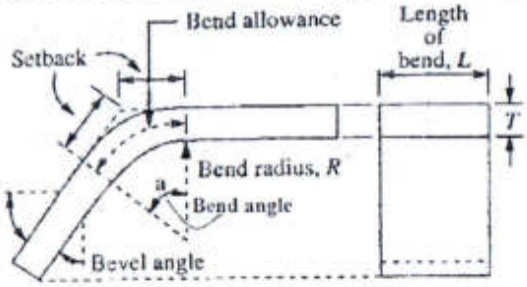

Figure 1: Bending terminology

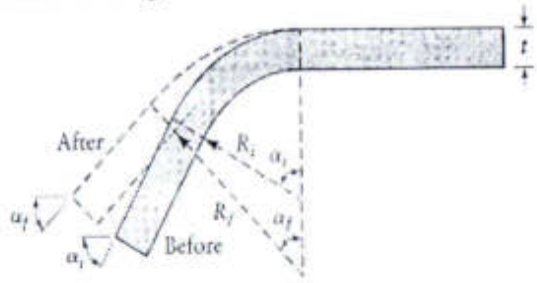

Figure 2: Terminology for spring back in Bending

The outer fibers of the material are in tension and the inner fibers are in compression. Theoretically, the strains at the outer and inner fibers are equal in magnitude and are given by the equation.

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INTELLIGENT BATTERY MANAGEMENT SYSTEM FOR FUEL VEHICLES

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ABSTRACT

Sometimes the vehicles wouldn't start this is due to the battery of the vehicle, more specially either it's state of charge(SOC) or it's state of health(SOH).The challenge is to devise a user friendly application based battery management tool through which the user can get critical information about the state of charge(SOC) as well asthe state of health (SOH) along with the set of actions required to ensure a reliability of the starting is maintained.This application also helps in monitoring the temperature of the car battery. Keywords- state of charge, state of health, battery management system ,MQTT protocol.

1.INTRODUCTION

Car Battery is one of the most crucial and essential part of the car elements. The Car battery can majorly hamper your fuel economy drastically. If the car is flat then we have to spend hours to start the car .This will not only waste your time but also exert the engine and decrease the life expectancy. So it is important to monitor and manage the health of the battery. The main objective of this paper is to monitor the health level of the battery, temperature of the battery and over voltage protection through mqtt mobile application.

A battery management system is essentially the "brain" of a battery pack. It measures and reports crucial information for the operation of the battery and also protects the battery from damage in a wide range of operating conditions. Battery management system for Electric vehicles , Hybrid electric vehicles and even for monitoring and managing mobile batteries,there are proposed models and applications are used . But for Fuel cars there is no hardware modules or software applications to monitor the SOH of the battery. In this paper ,we have used hardware modules such as nodemcu, overvoltage protection circuit, dc buck converter, GSM SIM800L and the software used is Arduino 1.8.7 and the application used for monitoring the battery is linear MQTT (Message Queuing Telemetry Transport) dashboard.

2.EXISITING SYSTEM

The Battery Management for electric vehicles have various models and software applications to monitor battery level. The Battery has the great impact on the performance of electric vehicles, basically determining the driving range.
Li-ion Batteries are most widely used in the electric cars. The li-ion chemistry is the battery technology of choice due to its good energy density ,good power rating and charge/discharge efficiency in pulsed energy flow systems.
Another important function of a BMS is to extend the battery life by facing the charge

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DESIGN ANALYSIS AND EXPERIMENTAL EVALUATION OF SANDWICH COMPOSITES SUBJECTED TO FATIGUE

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Abstract— The fatigue response of sandwich composite panels with an improved structure and different orientations to increase their fatigue resistance is investigated herein. In order to compare the fatigue performance of sandwich structures, a specific and instrumented ball drop tester was designed and developed. Different sandwich structures are analyzed. Composite materials here compose of E-Glass fibre matrix composite skin and a foam core. Usually the foam core is Polyurethane (P.U) and Polyphenolic .The latter structure is specially designed to improve crashworthiness for transport applications, aeronautical and space structures.

The main results of this study are evaluation of the absorbing energy performance of the sandwich structures, subjected to a repeated impact of the sandwich panels up to fatigue, and the development of criteria useful for materials selection. These sandwich panels have shown a better performance in term of impact energy absorbing properties and strength respect to traditional sandwich structures. The predicted fatigue behavior of sandwich panel compared fairly well with results from finite element analysis. Analytical predictions of these were also found to be in good agreement with experimental data. Specimen deformation behavior and fracture features are correlated to deformation curves obtained during the testing. Extensive experiments are carried out to characterize different oriented sandwich panels for the mechanical behavior as well.

Key Words— composites, sandwich, fatigue, deformation.

I. Introduction

Increasing performance demands for modern technology applications make it necessary to look for new materials. It is difficult to achieve high and strict performance standards using any one material, hence new materials are fabricated by combining two or more conventional materials. These materials named as composite materials give unique combination of properties, which cannot be obtained from any single conventional material. A formal definition of composite materials give by ASM Handbook [4] is macroscopic combination of two or more distinct materials, having a recognizable interface between them.. Composites are normally made by incorporating some reinforcement such as fibres in a bulk material known as matrix. Some of the main advantages of composite materials are high strength, modulus, bending stiffness and chemical resistance. Properties of composites can also be tailored according to specific design requirements, directional and spatial properties.

Defining a composite material needs information on three aspects

- Matrix material: e.g. metal, polymer or ceramic
- Reinforcements: e.g. continuous or discontinuous fibres or particles
- Structure: e.g. laminated or sandwich

The matrix holds the reinforcements in an orderly pattern. Because the reinforcements are usually discontinuous, the matrix also helps to transfer load among the reinforcements. Matrix materials are usually some type of plastic, and these composites are often called reinforced plastics. There are other types of matrices, such as metal or ceramic, but plastics are by far the most common. There are also many types of plastics, but a discussion of them is beyond the scope of this week's column. Suffice it to say for now that the two most common plastic matrices are epoxy resins and polyester resins.

Metal Matrix Composites (MMCs) - mixtures of ceramics and metals, such as cemented carbides and other cermets

Polymer Matrix Composites (PMCs) - Thermosetting resins are widely used in PMCs

Examples: epoxy and polyester with fibre reinforcement, and phenolic with powders

Ceramic Matrix Composites (CMCs) - Al_2O_3 and SiC imbedded with fibres to improve properties, especially in high temperature applications

II. Literature Survey

A. Russo, B. Zuccarello worked on the analysis of the mechanical behaviour of a class of sandwich structures widely employed in marine constructions, constituted by fibre-glass laminate skins over PVC foam or polyester mat cores. In detail, a systematic experimental study and numerical simulations have shown that the theoretical prediction of the strength and the actual fatigue mechanism of these sandwich structures can be affected by significant errors, especially in the presence of prevalent shear loading. Moreover, because of the low shear stiffness and the elastic constants mismatch of the skins and core

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Performance and emission characteristics of a diesel engine with varying injection pressure and fueled with hydrogen and cottonseed oil methyl ester blends

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Abstract

The influence of injection opening pressure (IOP) for 20% blend (B20) of cottonseed oil methyl ester and 15 liters per minute (lpm) of hydrogen dual fuel mode was investigated based on performance and emission characteristics of a single cylinder, four stroke, diesel engine with a rated power of 3.5 kW, rated compression ratio of 17.5 at a rated speed of 1500 rpm. The experiments were carried out at three different IOP of 200, 220 and 240 bar respectively. The results depict the maximum brake thermal efficiency, minimum brake specific fuel consumption, and lowest HC and CO and while the concentration of NOx slightly increased. It has been found that the combustion characteristics of cottonseed oil methyl ester and its diesel blends closely followed those of standard diesel. Present investigations revealed that IOP of 220 bars for 15 lpm hydrogen with B20 dual fuel mode is optimum compared to other blends of cottonseed biodiesel and hydrogen, but it causes higher levels of exhaust emissions.

Selection and/or Peer-review under responsibility of 7th International Conference of Materials Processing and Characterization.

Keywords: Alternate fuels, Cottonseed oil methyl ester, Combustion, Hydrogen and Performance.

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PERFORMANCE ANALYSIS OF SOLAR FLAT PLATE COLLECTOR

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Abstract: Now a days the usage of natural resources are highly in progress because artificial resources such as electricity, gasoline, fuel etc are in declination stage and are very expensive. Solar radiation from sun is emitted and falls on earth surface this radiation is collected by using solar collectors. The present work is aimed to predict the performance of flat plate collector tested for 3different days, using an application of water heating. The material used in the work is absorber plate, tube or pipe made of GI, casing and glass. The absorber plate material is mild steel and tube or pipe material is galvanized iron. Mild steel material have absorbility is about 0.8 with black paint coated. The tube material is galvanized iron which is mild steel with coated with zinc for corrosion resistance. For this selection of material the maximum efficiency obtained was 9.75% at temperature 670 c
Keywords: Flat Plate Collector (FPC), Tout(Outlet temperature), Tin(Inlet Temperature), Glazing cover, Glazing frame, absorber plate

1. INTRODUCTION

Solar energy is the energy that sustains life on earth for all plants, animals and people. It provides a compelling solution for society to meet their needs for clean and abundant sources of energy in the future. Energy has played a key role in bringing about our modern civilization. In the era of modern civilization, energy demands are likely to increase for power generation for industrial and domestic usage. Solar radiation is primarily transmitted to the earth and is collected by using collectors. Solar radiation provides enormous amount energy. Solar radiation has been utilized for centuries by peoples for heating and drying. Solar water heating is one of the most successful applications of solar energy.

Solar collectors domestic applications are flat plate, evacuated tube, or concentrating collectors. Flat plate collector (FPC) is a special kind of heat exchanger that transforms solar radiation energy to internal energy which is transferred through a working liquid. This is commonly found in domestic home.

The principles involve in FPC is to gain as much as possible the radiation energy from the sun by heat absorption. The energy which has been collected is transferred through conduit tubes by working fluids (usually water) which are integrated with heat absorber plate. Then, the warm water carries the heat to the hot water system or to storage subsystem which can be used during low sun radiation.

In FPC, the ability to absorb more energy is most important in its thermal performance. The heat absorber plate serves as the central component of the flat plate collector. When the absorber plate absorbs
more heat from the Sun, the outlet temperature (T out
) should have higher value from inlet temperature (T in) Thus, from the temperature values, efficiency of the FPC can be obtained. For domestic water heating, the FPC can heat the water up to 50°C.

The most common collector types are evacuated tubular collectors (ETC) and flat plate collectors (FPC) without vacuum. Different types of these collectors are described below. Concentrating collectors (Parabolic trough, Fresnel etc.) may also be used, but since a large part of the annual irradiation is diffuse – especially in the northern part Europe – and of these types do not utilize the diffuse part, they are not described further in this fact sheet.

A. PROBLEM STATEMENT

The ability of the heat absorber plate to absorb more heat from the sun and maintain the heat is the main key in FPC performance. The efficiency of the FPC is defined as the ratio of the useful gain over some specified time period to the incident solar energy over the same period of time .Heat absorbed by FPC depends on thermal properties as well as on the design of the heat absorber plate. Material of the heat absorber plate plays a crucial role in the heat absorbing ability due to the thermal properties. MODELING AND WORKING

B. COMPONENTS OF A FLAT PLATE COLLECTOR

A flat plate collector is a basic and simple heat absorber which absorbs heat from the sun radiation. Flat plate collector

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SOME STUDIES ON FAILURES IN GAS TURBINE BLADES – A REVIEW

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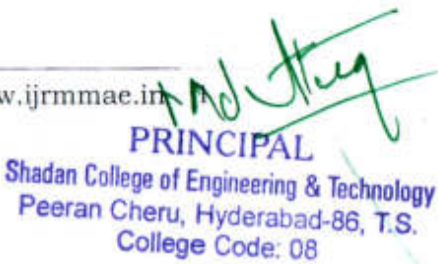
Abstract

Advancements made in the field of materials have contributed in a major way in building gas turbine engines with higher power ratings and efficiency levels. Improvements in design of the gas turbine engines over the years have importantly been due to development of materials with enhanced performance levels. Gas turbines have been widely utilized in aircraft engines as well as for land based applications importantly for power generation. Advancements in gas turbine materials have always played a prime role – higher the capability of the materials to withstand elevated temperature service, more the engine efficiency; materials with high elevated temperature strength to weight ratio help in weight reduction. A wide spectrum of high performance materials - special steels, titanium alloys and super alloys - is used for construction of gas turbines. Manufacture of these material soften involves advanced processing techniques. Other material groups like ceramics, composites and inter-metallic have been the focus of intense research and development; aim is to exploit the superior features of these materials for improving the performance of gas turbine engines. The materials developed at the first instance for gas turbine engine applications had high temperature tensile strength as the prime requirement. This requirement quickly changed as operating temperatures rose. Stress rupture life and then creep properties became important. In the subsequent years of development, low cycle fatigue (LCF) life became another important parameter. Many of the components in the aero engines are subjected to fatigue- and /or creep-loading, and the choice of material is then based on the capability of the material to withstand such loads. Coating technology has become an integral part of manufacture of gas turbine engine components operating at high temperatures, as this is the only way a combination of high-level of mechanical properties and excellent resistance to oxidation / hot corrosion resistance could be achieved. The review brings out a detailed analysis of the advanced materials and processes that have come to stay in the production of various components in gas turbine engines. While there are thousands of components that go into a gas turbine engine, the emphasis here has been on the main components, which are critical to the performance of the engine. The review also takes stock of the R&D activity currently in progress to develop higher performance materials for gas turbine engine application.



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Strength Based Design of Compression Springs for Auto-Injector Syringes

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Abstract:
Spring controlled auto injector syringe is a smart device in medical field which is being widely used by inexperienced patients in consuming injected medications in their homes. Designing spring for this device imposes the problem of determining which configuration will meet the given space constraint and load requirement. In general springs fails due to high stress which arises due to inadequate space allocated against the given load requirement. Hence it is essentially required to cater for adequate space at preliminary design stage so as to avoid high stress in spring or adopting an expensive spring and incorporate modification in the design at later stage. Existing relations will be useful to estimate load, stress and energy for a given spring. However, they have limited scope in spring design while meeting specific relationship between load and space as the associated independent parameters will not be provided directly to the designer. Under these circumstances designer will assume arbitrary values for some of these parameters which yields to portion of desired spring numbers. Accordingly rest of the unknown parameters will be estimated based on above mentioned relations and correlate the outcome with remaining portion of desired spring numbers. In general the desired and estimated data will not be same which causes to repeat the above on iterative mode until convergence occurs. To avoid such situation a direct method has been proposed in this work which permits for quick estimation of least final stress anticipated with in the allocated space against the given load requirement. Design procedure so established is converted in form of general purpose code in MATLAB. This software will be extremely helpful as a hand calculator for the designer to quickly arrive at the design of the spring.

Keywords: Preloading, Helical spring, GUI, MATLAB, etc.

I. INTRODUCTION

Auto injector syringe is an innovative device in the medical field which is being aiding inexperienced patients in consuming injected medications in their homes. These devices are normally spring controlled and their operation is identical to ball-point pens. The needle stays inside the device for the sake of safety and will be forced out by the pre-loaded spring by pressing a button. Once the needle is forced out, the medication will be released automatically. One such auto injector syringe having pre-loaded spring is shown in Fig. 1.

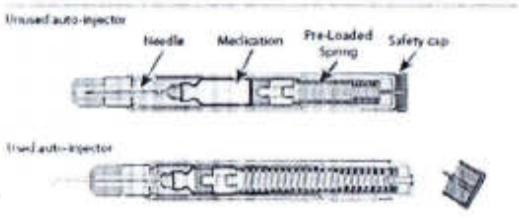

Fig. 1. Auto injector syringe with pre-loaded spring

Spring designer for this kind of requirement experiences the problem of estimating which spring will fit with in the given space constraint and meet the given load requirement. In general springs fails due to high stress which arises due to inadequate space allocated against the given load requirement. Hence it is essentially required to cater for adequate space at preliminary design stage so as to avoid high stress in spring or adopting an expensive spring and incorporate modification in the design at later stage.

To begin with existing literature is referred for design procedure that needs to be adopted for the intended requirement.

Review of basic stress distribution, properties of helical coil springs is carried out. Detailed discussion on the parameters affecting the quality of coil springs is also discussed. Factors influencing strength of coil spring. FEA analyses by the researchers for coil spring analysis are also studied. Reduction in weight is a necessity of automobile industry. Thus the springs are to be configured for higher stresses with small dimensions. This needs critical design of coil springs. This leads to crucial material and manufacturing processes. Decarburization which was not a major consideration in the past now becomes essential, to have better spring design [1]. Every two-wheeler has a feature for horn. It is used for ensuring a safe distance or to communicate for safe drive. The horn is vital element in vehicle. It is directly related to safety as well as credit of the company. Static analysis estimates the safe stress and corresponding pay load of the helical compression spring. The present work attempts to study the safe load of the helical compression spring. A typical helical compression spring design of two wheeler horn is chosen for study. This work narrates static analysis of the helical compression spring is performed using NASTRAN solver and compared with analytical results. The pre-processing of the spring model is carried out by using HYPERMESH software [2]. In reference to the previous project, the helical compression spring has been configured in such a way that when the vehicle travels over the spring, the spring takes the maximum load of 200 kg and the rest is borne by the ground. For this purpose, the spring is analyzed for the

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INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

APPLICATION OF QUEUING THEORY MODELS FOR OPTIMIZED SERVICE TO AIR LINE PASSENGERS

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ABSTRACT

A study has been undertaken to investigate the quality of service rendered to airline passengers. The passengers who come to airport would report at the respective counters in the first stage with relevant documents and tickets. It is found that for each flight service three counters are opened and passengers are free to join any of the queues at counters. At those counters the passengers are issued with the boarding passes after verification of documents. In the second stage where immigration cum security pass activity is performed. The system is considered as two stages multiple channels Jackson Queuing model. Data have been recorded for several days at various times in each of the days and at various counters at the stages. The data have been analyzed and the arrival rate of passengers, service rate of passengers, waiting time in the queue system and length of system are computed. The quality control charts are drawn to depict the waiting time of the passengers in the queues before boarding the respective flights. The waiting time was exorbitantly high and hence optimized the serving system with the addition of optimum number of servers. With the proposed addition of optimum servers the total cost is optimized and the waiting time of passengers before boarding the respective flights is reduced greatly and improves the customer's satisfaction.

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INTRODUCTION

Air line passengers are subjected to increasing levels of congestion in airport environments. This congestion is caused by three interrelated problems. The first is fluctuations of demand. Variations of demand occur at various time frames ranging from days to months. Sometimes special events create demand spikes. The second cause of congestion is related to network issues. The third cause of congestion in check-in areas is related to flight scheduling. Here, the congestion is caused by arrangement of scheduled departure times of aircraft. The congestion is caused by overlapping passenger arrival periods of the chosen aircraft. It can be seen that overlapping passenger arrival distributions concept assists in estimation of the period of congestion. (Ervina Ahyudanair *et al.*, 2005) Queuing Theory was developed to provide models to predict behavior of systems that attempt to provide service for randomly arising and not unnaturally demand.

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Analytical Queueing models have frequently been found impractical for many types of real world problems owing chiefly to the inability of queue system to change their parameters in response to fluctuation in traffic intensity. However at the security service in airports it is unvarying and classical models quite well can be applied. (Ronald R. Gillam, 2009) The earliest problems studied were those of telephone traffic congestion and were resolved by queueing theory models (Syski, 1986). Queuing analysis carried out to analyze patient load in outpatient and inpatient services to facilitate more realistic resource planning. Queuing analysis reported in the case study provides a basis for estimating medical staff size and number of beds, which are two very important resources for outpatient and inpatient services in a large hospital, and all other hospital resources in one way or another depend on them (Mital, 2010). A new approach in designing of semiconductor equipment based Queuing Theory to reduce cycle time was applied in calculating optimum batch size for their processing equipment. (Hideaki Takagi, 1993) In production shop floors where the machines that require repair, it is the total down time which includes the queue wait time and repair time that is kept

Experimental analysis of orthotropic cylindrical shell subjected to Internal Pressure

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Abstract —Experimental Analysis of an orthotropic cylindrical shell with helically wound fiber reinforcement has been carried out in the present paper when the shell is subjected to internal pressure p. Carbon/Epoxy composite materials have been chosen with different stacking sequence. Data is generated by measuring the mechanical behavior like strains in hoop direction, maximum hoop stresses that are formed during internal pressure loading. In order to determine these parameters, internal pressure tests are done on the filament wound composite tube specimens according to ASTM D 1599-99 standard. Pressure tests revealed that the carbon fiber reinforced composite tubes exhibited a better burst performance, and the maximum burst performance is achieved at a winding angle configuration of [90°][±55°][90°]. The results obtained from this work are useful in the design of orthotropic cylindrical shells and design of robotic actuators where light weight considerations with high strength are of prime importance.

I. INTRODUCTION

Composite materials have several advantages over traditional engineering materials, which make them attractive for many industrial applications. Composite materials have superior mechanical properties like high specific stiffness, high fatigue strength, and good impact properties and offer high corrosion and chemical resistance. Besides, composite materials provide good dimensional stability and design flexibility, they are appropriate for near-net-shape processing. Improvement in the mechanical performance of cylindrical shell-type structures may be achieved by using reinforcements or by making small modifications in the structural geometry. In other cases, the buckling load to the longitudinal loading of thin-walled cylindrical columns can be greatly improved by the use of a fluted design. the periodic variation of the radius around the circumference. Many papers appeared in the analysis of cylindrical composite shells and Wilkins and Love [1] analyzed the combined compression and shear buckling behavior of laminated composite cylindrical shells characteristic of fuselage structures. Waltz and Vinson [2] presented the method of analysis for the determination of inter laminar stresses in laminated cylindrical shells of composite materials. El Naschie [3] investigated the large deflection behavior of composite materials shells in determining the lower limit of the asymmetric buckling load. Fujezak [4] studied the torsional fatigue behavior of graphite-epoxy cylindrical shells. Bootan [5] investigated the buckling of imperfect composite material cylinders under the combined loading involving axial compression external pressure and torsion. The objective of this paper is to assess the mechanical behavior of the filament wound composite tubes working under internal pressure by experimental techniques to develop a database for design of filament wound pressure vessels and determination of their useful life cycle. To find Maximum hoop stresses formed during loading. Strains in hoop direction. Elastic constants in hoop direction, will be determined, and thus the necessary data is to be used in the design applications.

II. METHODOLOGY

Manufacturing Method:

To fabricate continuous fiber-reinforced PMCs, the very important point is that the fibers should be oriented all in the same direction and should be distributed uniformly throughout the plastic matrix. Filament winding is used for the present investigation. Filament winding is a process where the continuous fibers are accurately positioned in a prearranged pattern to form a cylindrical shape. A number of fiber rovings are pulled from a series of creels and tensioners that control the tension of the fibers into a liquid resin bath that contains the resin itself, the hardeners and the accelerators. At the end of the resin tank, the rovings are pulled through a wiping device where the excess resin is removed from the rovings. Once the rovings are thoroughly impregnated and wiped, they are collected together in a flat band, pass through the carriage and located on the mandrel. The traversing speed of carriage

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XVIII Annual International Conference of the Society of Operations Management (SOM-14)

A Study on Strengthening the Operational Efficiency of Dairy Supply Chain in Tamilnadu, India

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Abstract

The main objective of this paper is to study the issues in improving the operational efficiency of the dairy supply chain in Tamil Nadu, India. Dairy Farming is a major occupation of the people of Tamil Nadu, India and it contributes a significant amount to the growth of our country. In this paper, Tamil Nadu dairy development department's objectives and its three-tier structure were studied. Through SWOT analysis its strengths, weaknesses, opportunities and threats were analyzed. In our study Tamil Nadu Cooperative Milk Producers Federation is compared with Gujarat Cooperative Milk Producers Federation (AMUL). The major issues influencing the dairy farming are studied through literature survey, field study and researchers experience. They are presented in this paper. There were three major important field studies conducted at various time periods. The data has been collected through a questionnaire method and these interactions were recorded by a video camera. Based on the research work carried out on dairy supply chain in Tamil Nadu, India, some key recommendations are made for the attention of policy makers to strengthen the operational efficiency. There are five areas of focus. They are, creation of special dairy zone, implementing dynamic milk procurement method, strengthening cooperative societies, creation of feed bank and increasing fodder productivity, integrated animal health plan and information technology.

Keywords: Dairy farmer's issues; Dairy supply chain; Co-operative system; Milk procurement price

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Peer-review under responsibility of the scientific committee of XVIII Annual International Conference of the Society of Operations Management (SOM-14).

1. Introduction

Dairying plays a significant role in strengthen rural economy in Tamil Nadu. It has brought about socio-economic transformation in Tamil Nadu. Small farmers, marginal farmers and downtrodden constitute majority of milk producers. Dairying has vast potential to generate employment and has helped in poverty

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PERFORMANCE ANALYSIS OF SOLAR FLAT PLATE COLLECTOR

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Abstract: Now a days the usage of natural resources are highly in progress because artificial resources such as electricity, gasoline, fuel etc are in declination stage and are very expensive. Solar radiation from sun is emitted and falls on earth surface this radiation is collected by using solar collectors. The present work is aimed to predict the performance of flat plate collector tested for 3different days, using an application of water heating. The material used in the work is absorber plate, tube or pipe made of GI, casing and glass. The absorber plate material is mild steel and tube or pipe material is galvanized iron. Mild steel material have absorbility is about 0.8 with black paint coated. The tube material is galvanized iron which is mild steel with coated with zinc for corrosion resistance. For this selection of material the maximum efficiency obtained was 9.75% at temperature 67° c

Keywords: Flat Plate Collector (FPC), T_{out}(Outlet temperature), T_{in}(Inlet Temperature), Glazing cover, Glazing frame, absorber plate

I. INTRODUCTION

Solar energy is the energy that sustains life on earth for all plants, animals and people. It provides a compelling solution for society to meet their needs for clean and abundant sources of energy in the future. Energy has played a key role in bringing about our modern civilization. In the era of modern civilization, energy demands are likely to increase for power generation for industrial and domestic usage.
Solar radiation is primarily transmitted to the earth and is collected by using collectors. Solar radiation provides enormous amount energy. Solar radiation has been utilized for centuries by peoples for heating and drying. Solar water heating is one of the most successful applications of solar energy.

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In FPC, the ability to absorb more energy is most important in its thermal performance. The heat absorber plate serves as the central component of the flat plate collector. When the absorber plate absorbs more heat from the Sun, the outlet temperature (T out) should have higher value from inlet temperature (T in) Thus, from the temperature values, efficiency of the FPC can be obtained. For domestic water heating, the FPC can heat the water up to 50°C.

The most common collector types are evacuated tubular collectors (ETC) and flat plate collectors (FPC) without vacuum. Different types of these collectors are described below. Concentrating collectors (Parabolic trough, Fresnel etc.) may also be used, but since a large part of the annual irradiation is diffuse – especially in the northern part Europe - and of these types do not utilize the diffuse part, they are not described further in this fact sheet.

A. PROBLEM STATEMENT

The ability of the heat absorber plate to absorb more heat from the sun and maintain the heat is the main key in FPC performance. The efficiency of the FPC is defined as the ratio of the useful gain over some specified time period to the incident solar energy over the same period of time. Heat absorbed by FPC depends on thermal properties as well as on the design of the heat absorber plate. Material of the heat absorber plate plays a crucial role in the heat absorbing ability due to the thermal properties. Moreover, the correct thickness important in absorber plate selection. In this project, mild steel and galvanized iron is used for absorber plate and tube respectively.

The optimization of thickness and material used in the design of the
FPC will yield the desired effect to maximize its efficiency.

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Investigating perceived significance of Green manufacturing practices for spreading GSCM

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Abstract

Research papers have explored the relationship betweenadoption of green supply chain management (GSCM) practices and competitive advantage. Thepurpose of this paper is to further investigate this relationship by examining the case of green manufacturing practices (GMP).Through the path of spreading innovation andresource-advantage theory, the authors examine whether or not consumers perceive products madevia GMPs to be equivalent to brand-new products in terms of reliability.Asurvey method is used togather data from a diverse sample of 287 participants. Data are analyzed via ANOVA to test thehypotheses. The findings suggest that consumers perceive products made via some GM practices tobe inferior to brand-new products in terms of reliability. However, participants indicated no perceiveddifference in reliability between products made by GM practices and brand-new products.The findings suggest that adoption of some GSCM practicesmay not necessarily lead to competitive advantage, which may hinder the process of spreading GSCM. This studyis limited by its focus on just one aspect of competitive advantage. Future studies should examine therelationship between GSCM adoption and other measures of competitive advantage.Understanding that consumers may perceive products made via someGM activities as being inferior to brand-new products, firms wishing to employ GM maywish to compete on other dimensions, such as low price or service.Earlier research findings were studied for this research, which suggeststhat adoption ofGSCM may not fuel competitive advantage. Future research is suggested to find missing links todevelop this body of literature.

KeywordsGreen supply chain management, Logistics management, Green manufacturing, Sustainability, spreading innovation, Resource-advantage, Reliability

Paper type Research paper

1. Introduction

Sustainability is becoming a key driver of spreading innovation (Nidumolu et al., 2009). Businesses in all areas of the supply chain want to achieve competitive advantage by adopting sustainability initiatives. Business leaders and academic researchers focus more on GSCM (Nikbakhsh, 2009; Sarkis, 2003). However, the literature inthis area is not broadly developed and the awareness of spreading various GSCM practices are not well understood (Srivastava, 2007). Additional GSCM research can be done by spreading innovation through different channels.

Some research suggests thatimplementation of GSCM is not directly linked to measures of competitive advantage(Kim, 2011); other studies have found such a relationship to be significant (Rao and Holt,2005; Zhu and Sarkis, 2004).

This study is further strengthened by further investigating therelationship between GSCM adoption and competitive advantage. To do so, theremainder of this manuscript is organized as follows. First, we review GSCMliterature and introduce a common platform for GSCM and green manufacturing (GM) This study explores the impact of GM to spread innovation on GSCM; thus, the idea ofGM is developed through discussion of the overlap between GSCM and Manufacturing. We thenreview literature regarding perceived reliability, where we describe why we use perceived reliability as a tool

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Optimal Design of Helical Torsion Spring for Engine Valve Timing Mechanism

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Abstract – **A design methodology is evolved and arrived at optimal configuration with respect to geometry for helical torsion spring for engine valve timing mechanism. Within the space constraint maximum working stress experienced by the spring should be within acceptable value. Optimal geometry is chozen for meeting this requirement. Two geometries (Round and square) are considered for carrying out the intended study. Outcome of the exercise is molded in a form that replicate a hand calculator for using which, designers need not possess expertise in any software. This GUI based software developed in MATLAB facilitates an 'exe' file which can be executed from any computer for which neither computer nor the designer should possess software. Working with this software will be as comfortable and similar to that of calculator in a typical computer. Using this software optimal design parameters of the intended spring are worked out. This software will be extremely useful for quickly arriving at optimal configuration for any combination of input design parameters. For running this software designer has to key in the input values in empty boxes corresponding input parameters. Maximum working stress values experienced by the helical torsion spring with round wire and square wire are compared with maximum allowable stress. In addition to this angular deflection values experienced by the spring with round and square wires are also compared. Based on these observations square wire is recommended for configuring helical torsion spring for engine valve timing mechanism.**

Keywords *– Helical torsion spring, round wire, square wire, GUI, MATLAB, etc.*

1 INTRODUCTION

In a piston engine, valve timing mechanism takes care of precise timing of the opening and closing of the valves. Helical torsion spring used in engine valve timing mechanism works between the frame and the valve and is used to close the valve and also to maintain the contact between the valve stem and the rocker arm.

Helical torsion spring in a typical valve timing mechanism is shown in Fig. 1.

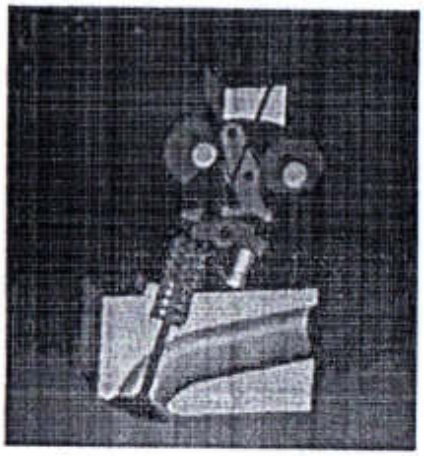

Fig. 1 Helical torsion spring in valve timing mechanism

Helical torsion springs are identical to that of helical compression tension with respect to basic shape. However its ends will be shaped such that the spring can be loaded by a twisting moment (Torque) about the axis of the spring coil. Due to the pattern of stressing, main

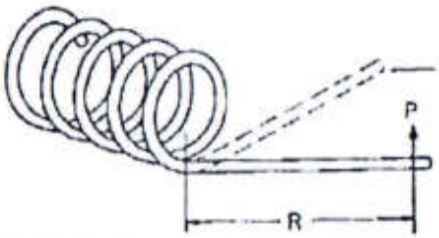

Fig. 2 Typical way of loading helical torsion spring stress will be flexural against helical tension compression spring in which main stress will be shear. Typical way of loading helical torsion spring is shown in Fig. 2

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OPTIMIZATION OF A SINGLE CYLINDER, 4-STROKE DIESEL ENGINE PERFORMANCE PARAMETERS USING DIESEL/COTTON SEED OIL BLEND WITH HYDROGEN INDUCTION BY TAGUCHI METHOD

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ABSTRACT

The performance of a diesel engine by blending cottonseed oil with the diesel and suction is enriched with hydrogen inducting through port in the suction stroke. The process parameters identified are injection operating pressure (IOP), compression ratio (CR) and amount of hydrogen each at three levels. Taguchi L_9OA is chosen for the experimentation and two responses have been recorded namely brake thermal efficiency (BTE) and brake specific fuel consumption (BSFC). The contribution of these parameters on these parameters on those responses has computed by signal to noise (S/N) analysis.

Key words: Injection Operating Pressure, Compression Ratio, Hydrogen, Taguchi, Parameters, Optimized Condition.

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The Study on Comparison of Apparent Stress and Solitude Sensation between Breast Cancer Patients and Ordinary Persons

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Abstract

The motive of this study was once to take a look at the examine of perceived stress and feeling lonely in breast cancer sufferers and ordinary individuals. Methods: This lookup is causal-comparative. The population consists of all sufferers with breast cancer in hospitals of Ardebil. 60 patients and 60 normal people were selected with the sampling method. The college students answered the same questionnaire along with social and emotional loneliness scale for adults (SELSA_S) and questionnaire of perceived stress scale. Data evaluation protected MANOVA analyses and SPSS software program (package of Spss / pc + + ver18The effects showed that there is a significant relationship between perceived stress positive, poor and feeling lonely in breast cancer sufferers and regular individuals. According to the outcomes then there is a giant relationship between loneliness in breast most cancers sufferers and normal men and women and mean loneliness feeling in sufferers with breast cancer greater than everyday subjects.
Keywords: Feeling lonely, Perceived stress, Breast cancer patients

Introduction

The impact of a breast cancer prognosis and its therapy on high-quality of existence (QoL) is properly documented (e.g., Ganz et al., 1996; Holzner et al., 2001). Shapiro et al. (2001), in their evaluate of the relationship between QoL and psychosocial variables in breast most cancers patients, noted that "the biomedical model of disease, even though crucial, does no longer take into account all of the complex elements concerned in cancer … a broader, greater integrative framework, which includes psychosocial factors, is needed" (p. 502). The biobehavioral mannequin of cancer stress and sickness course presents such a framework (see Andersen, Kiecolt-Glaser, & Glaser, 1994, for a entire discussion).

In this conceptual model, cancer analysis and most cancers treatments are described as an objective, bad events. Although terrible activities do not always produce stress, facts from many studies document extreme acute stress at most cancers analysis and remedy (Maunsell, Brisson, & Deschenes, 1992). Even when stress declines from the height at analysis (Edgar, Rosberger, & Nowlis, 1992), many QoL difficulties continue to be and new ones may additionally occur throughout therapy and/or restoration (e.g., psychological distress; relationship, social, and occupational

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Development of Anthropomorphic Robot Hand

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Abstract

The anthropomorphic robot hand with the linear actuators consisting of a motor and a lead screw has the stronger grasping power than the hand actuated by motors and insufficient gear reduction. This paper presents the SKKU Hand II parallel mechanism to use the linear actuators effectively for the robot hand. It enables us to get the forward/inverse kinematic solutions, while the previous mechanism for the linear actuator failed. The driving circuits for the SKKU Hand II are embedded in the hand, and each driving circuit communicates with others using CAN protocol. In addition, a tactile sensing system is developed with miniaturized electronic hardwares such as charge amplifier, signal processing unit etc., and it is integrated into the robot hand. In addition, the workspace of the robot finger module is enlarged by EM joint locking mechanism depending on the locking states. In order to verify the effectiveness of the mechanisms adopted in the robot hand, we theoretically and numerically analyze the performances of the robot finger module such as bending speed, fingertip force, and workspace.

Keywords: Robot Hand, Anthropomorphic, Parallel Mechanism, Kinematics, CAN Protocol

1. Introduction

Recently, robots have begun to perform various tasks on replacing the human in the daily life such as cleaning, entertainments etc. In order to accomplish the effective performance of intricate and precise tasks, robot hand must have special capabilities, such as decision making in given condition, autonomy in unknown situation and stable manipulation of object. It must also possess tactile information to be able to carry out complicated manipulative tasks in a natural environment. Consequently, the tactile sensor is required to support natural interaction between the robot and the environment.

Many researches on the tactile sensing and the anthropomorphic multi-fingered robot hand have been reported up to now. Dario *et al.* developed "Artificial tactile sensing system" for a robot finger (Dario & Buttazzo, 1987). The system is able to detect the contact force, the vibration and the variation of temperature like mechanoreceptor of the human by arranging PVDF films that possess piezoelectricity and pyroelectricity. Howe *et al.* developed a dynamic tactile sensor that can detect slippage by means of the change of stresses due to deformation of the contact with the object (Howe & Cutkosky, 1993). Maeno *et al.* presented a tactile sensor, called "artificial finger skin" based on PVDF (Fusjimoto et al., 1999; Yamano et al., 2003). The sensor capable of detecting the incipient slip was designed to possess the characteristics similar to that of the human finger. Hosoda *et al.* reported a soft fingertip with two layers made of different kinds of silicon rubbers (Hosoda et al., 2003). The Utah/MIT hand developed by Jacobsen *et al.* is driven by actuators that are located in a place remote from the robot hand frame and connected by tendon cables (Jacobsen et al., 1984; Jacobsen et al. 1988). Hirzinger *et al.* developed DLR-Hand II, which build the actuators into the hand. Each finger of robot hand is equipped with motors, 6-DOF fingertip force torque sensor and integrated electronics (Butterfass et al., 2001; Gao et al., 2003). Kawasaki *et al.* presented anthropomorphic robot hand

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DESIGN OF FAN PERFORMANCE DETECTION SYSTEM BASED ON ARM EMBEDDED SYSTEM

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Abstract

The fan performance detect system is based on embedded ARM, and this is an integrated system that detect and analysis the operational status of Fan performance. The detection system for fan energy provides a new technical means. It is realizing the fan system monitor each parameter real-time, reduce the traditional fan testing on the field personnel needs, and improve the fan detection accuracy of various parameters. Thus it is instructive to provide detect data for reference for enterprise's production.

Keywords: embedded ARM, fan performance detect system, real-time monitoring, and fan testing

1. Introduction

In the detection of fan performance, the fan flow (or the wind) is an important index of the fan running status. There are lots of measurement of fan flow methods to choose and the kinds of flow meters are also relatively rich. For example, we can use the thermal mass, rotor flow meter, turbine flow meter, orifice flow meter, uniform tube flow meter, ultrasonic flow meter, waist wheel flow meter, etc. to measuring gas flow rate [1].

1.1. The Detection Method of Fan Performance

First, the performance of fan should be detecting in the normal operation state of the fan crew. Normal operation status refers to the production process of the actual running condition. If the fan is operate under the stable load in long-term, we can think of this condition as normal operation state; within the scope of certain change of Fan load, the most frequent load condition should be regarded as normal running state. In addition, the time of detection continuous time not less than 30 min, each measured parameters measurement frequency should be not less than three times, and take the reading of the arithmetic mean value as calculated value. Detection section should be sel ected respectively from the fan import not less than five times, export is not less than 10 times the diameter (equivalent diameter) of the straight pipe [2].The pipe with rectangular cross section use the long side of the multiple to calculate. We can ins tall the straight tube in fan import to measure if the fan is no import line, and no flat long section the dynamic pressure measurement section and static pressure section is not the same cross section. Dynamic pressure measurements should be according to the static pressure measurement section conditions to reduce.

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Investigating perceived significance of Green manufacturing practices for spreading GSCM

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Abstract

Research papers have explored the relationship betweenadoption of green supply chain management (GSCM) practices and competitive advantage. Thepurpose of this paper is to further investigate this relationship by examining the case of green manufacturing practices (GMP).Through the path of spreading innovation andresource-advantage theory, the authors examine whether or not consumers perceive products madevia GMPs to be equivalent to brand-new products in terms of reliability.Asurvey method is used togather data from a diverse sample of 287 participants. Data are analyzed via ANOVA to test thehypotheses. The findings suggest that consumers perceive products made via some GM practices tobe inferior to brand-new products in terms of reliability. However, participants indicated no perceiveddifference in reliability between products made by GM practices and brand-new products.The findings suggest that adoption of some GSCM practicesmay not necessarily lead to competitive advantage, which may hinder the process of spreading GSCM. This studyis limited by its focus on just one aspect of competitive advantage. Future studies should examine therelationship between GSCM adoption and other measures of competitive advantage.Understanding that consumers may perceive products made via someGM activities as being inferior to brand-new products, firms wishing to employ GM maywish to compete on other dimensions, such as low price or service.Earlier research findings were studied for this research, which suggeststhat adoption ofGSCM may not fuel competitive advantage. Future research is suggested to find missing links todevelop this body of literature.

KeywordsGreen supply chain management, Logistics management, Green manufacturing, Sustainability, spreading innovation, Resource-advantage, Reliability

Paper type Research paper

1. Introduction

Sustainability is becoming a key driver of spreading innovation (Nidumolu et al., 2009). Businesses in all areas of the supply chain want to achieve competitive advantage by adopting sustainability initiatives. Business leaders and academic researchers focus more on GSCM (Nikbakhsh, 2009; Sarkis, 2003). However, the literature inthis area is not broadly developed and the awareness of spreading various GSCM practices are not well understood (Srivastava, 2007). Additional GSCM research can be done by spreading innovation through different channels.

Some research suggests thatimplementation of GSCM is not directly linked to measures of competitive advantage(Kim, 2011); other studies have found such a relationship to be significant (Rao and Holt,2005; Zhu and Sarkis, 2004).

This study is further strengthened by further investigating therelationship between GSCM adoption and competitive advantage. To do so, theremainder of this manuscript is organized as follows. First, we review GSCMliterature and introduce a common platform for GSCM and green manufacturing (GM) This study explores the impact of GM to spread innovation on GSCM; thus, the idea ofGM is developed through discussion of the overlap between GSCM and Manufacturing. We thenreview literature regarding perceived reliability, where we describe why we use perceived reliability as a tool