**DEPARTMENT OF MECHANICAL ENGINEERING**

**UNIVERSITY OF ENGINEERING AND TECHNOLOGY** **TAXILA**

**Minutes of Meeting of Board of Post-Graduate Studies, held on 14.11.2019 at 10:00am in the Conference Room, MED**

Following were present:

* 1. Prof. Dr. Riffat Asim Pasha (In Chair)
	2. Prof. Dr. Mirza Jahanzeb (Dean FM &AE)
	3. Prof. Dr. M. Shahid Khalil
	4. Dr. Ajaz Bashir Janjua
	5. Prof. Dr. Amir Sultan
	6. Dr. Muhammad Ali Nasir
	7. Dr. Muhammad Shehryar (Invited Member)
	8. Dr. Muzaffar Ali (Invited Member)
	9. Dr. Nazeer Ahmed Anjum (Invited Member)
	10. Dr. Abid Hussain (Invited Member)
	11. Dr. Tanzeel ur Rashid (Invited Member)
	12. Dr. Azhar Hussain (Invited Member)

Meeting started with the name of Allah Al-mighty.

**Item No. 1. Post-graduate research seminar (Final Progress Report)**

Following students presented their progress report of M.Sc. Research.

1. Board recommended the final progress report of below mentioned scholar and allowed her to appear for her final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Zamurrad Arshad 17-MS-FT-AMD-08** |
|  **Supervisor** | Dr. Muhammad Ali Nasir |
| **Thesis Title** | Mechanical Characterization of Hybrid Composite Structures |
| **Panel for External Viva** | 1. **Dr. Yasir Nawab**, Dean Faculty of Engineering, National Textile University, Faisalabad.
2. **Dr. Saad Nauman**, Assistant Professor, Department of Material Science, IST Islamabad.
3. **Dr. Hafiz Sanaullah Butt**, Director AWC Hassanabdal.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Syed M. Kashif Shah 17-MS-PT-EnE-13** |
|  **Supervisor** | Dr. Tanzeel ur Rashid |
| **Thesis Title** | Smart Integrated Decentralization Strategies of Solar Power System in Buildings |
| **Panel for External Viva** | 1. **Dr. Kifait Ullah**, Asst. Prof. Dept. of Energy System Engineering, NUST
2. **Dr. Tanvir Ahmad**, Program Leader, SAARC Energy Center Islamabad.
3. **Dr. Noor Jamal**, Director Research, Atomic Energy Commission, Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed her to appear for her final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Adeeba Batool 17-MS-FT-AMD-12** |
|  **Supervisor** | Dr. Nazeer Ahmed Anjum |
| **Thesis Title** | Impact of Pin Tool Designs on the Mechanical Properties and Microstructure of Aluminum Alloys AA7075. |
| **Panel for External Viva** | 1. **Dr. Waqas Anwar**, General Manager, NESCOM, AWC Hassanabdal.
2. **Dr. Rizwan Zafar,** General Manager, NESCOM, PMO Haripur.
3. **Dr. Saeed Badsha,** Associate Prof. MED, IIU Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Shahbaz Ahmad 17-MS-FT-AMD-17** |
|  **Supervisor** | Dr. Nazeer Ahmed Anjum |
| **Thesis Title** | Study the Effect of Tool Design and Welding Parameters of FSW on Al Cylinder and Stainless Steel Pipe. |
| **Panel for External Viva** | 1. **Dr. Asif Khurram**, General Manager, PMO Haripur.
2. **Prof. Dr. Kamran Afaq**, DEAN, MED, HITEC University Taxila.
3. **Dr. Waqas Anwar**, General Manager, NESCOM, AWC Hassanabdal.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Muhammad Yasir Khan 17-MS-PT-AMD-08** |
|  **Supervisor** | Dr. Nazeer Ahmed Anjum |
| **Thesis Title** | Study the Effect of Tool Design and Welding Parameters of FSW on Al Cylinder and Stainless Steel Pipe. |
| **Panel for External Viva** | 1. **Dr. Waqas Anwar**, General Manager, NESCOM, AWC Hassanabdal.
2. **Dr. Saeed Badsha,** Associate Prof. MED, IIU Islamabad
3. **Prof. Dr. Mushtaq Ahmad Khan,** SCME, NUST Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Muhammad Mehboob 17-MS-EnE-PT-08** |
|  **Supervisor** | Dr. Tanzeel ur Rashid |
| **Thesis Title** | Exploring the new Cost-Effective and Energy Efficient Construction Materials for Buildings in Pakistan |
| **Panel for External Viva** | 1. **Dr. Noor Jamal**, Director Research, Atomic Energy Commission, Islamabad.
2. **Dr. Ajaz Bashir Janjua,** General Manager, HMC Taxila.
3. **Dr. Kifait Ullah**, Asst. Prof. Dept. of Energy System Engineering, NUST
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Waqar Ahmed 17-MS-PT-PE(T)-24** |
|  **Supervisor** | Dr. Abid Hussain |
| **Thesis Title** | Comparative Analysis of Heat Storage Properties of Phase Change Material Infiltrated in Various Metal Foams. |
| **Panel for External Viva** | 1. **Dr. Emad uddin,** HoD Mechanical Engineering Department, SMME, NUST Islamabad.
2. **Dr. Ali Zaidi,** Asst. Prof., SMME, NUST Islamabad**.**
3. **Dr. Muhammad Yameen Younis,** Department of Mechanical Engineering, MUST Mirpur (AJK).
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Muhammad Ramzan 17-MS-PT-PE(T)-19** |
|  **Supervisor** | Dr. Abid Hussain |
| **Thesis Title** | Thermal Management in Electric Vehicles by Employing Metal Foam Structured with Phase Change Material. |
| **Panel for External Viva** | 1. **Dr. Emad uddin,** HoD Mechanical Engineering Department, SMME, NUST Islamabad.
2. **Dr. Ali Zaidi,** Asst. Prof., SMME, NUST Islamabad**.**
3. **Dr. Muhammad Yameen Younis,** Department of Mechanical Engineering, MUST Mirpur (AJK).
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Muhammad Mehboob 17-MS-PT-PE(T)-24** |
|  **Supervisor** | Dr. Abid Hussain |
| **Thesis Title** | Investigation of Thermal Storage Properties Saturated with Phase Change Material.  |
| **Panel for External Viva** | 1. **Dr. Emad uddin,** HoD Mechanical Engineering Department, SMME, NUST Islamabad.
2. **Dr. Ali Zaidi,** Asst. Prof., SMME, NUST Islamabad**.**
3. **Dr. Muhammad Yameen Younis,** Department of Mechanical Engineering, MUST Mirpur (AJK).
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Tariq Mehmood 17-MS-PT-PE(T)-06** |
|  **Supervisor** | Dr. Muzaffar Ali  |
| **Thesis Title** | Phase Change Material (PCM) Based Thermal Energy Storage with Hybrid Inorganic Salts |
| **Panel for External Viva** | 1. **Prof. Dr. Nadeem A. Sheikh,** Mechanical Engineering Department, IIU Islamabad.
2. **Dr. Waheed Badar,** Asst. Prof., Mechanical Engineering Department, HITECH University, Taxila.
3. **Dr. Ajaz Bashir Janjua, General Manager, HMC Taxila.**
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**Item No. 2. Topic Approval/ Synopsis for MSc Thesis**

Board recommended following Research Topics and Supervisors against following MSc Scholars.

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| **Sr. No.** | **Student Name** | **Supervisor** | **Research Topics** |
| 1 | Sayyed Atif Shabbir16-MS-TSE-01 | Dr. Muddassir Ali  | Numerical Analysis of Ablation Process During Channel-Spark Deposition. |
| 2 | Muhammad Irfan Haider Abidi17-MS-FT-AMD-19 | Dr. Rizwan Ahmad Malik | Mechanical Characterization of Toughened Armored Materials. |
| 3 | Zubair Khan18-MS-PT-TSE-06 | Dr. Aneela Wakeel | Experimental Analysis of a Double Pass Solar Air Collector Using Integrated PCMs with Nanoparticles.  |
| 4 | Muhammad Shahid Aziz17-MS-PT-AMD-10 | Dr. Rizwan Ahmad Malik | Thermal Conductivity Analysis of Phase Change Materials Using Different Micelles.  |
| 5 | Asim Ali16-MS-PT-TSE-02 | Dr. Muddassir Ali | Mathematical Modeling of Beam-Target Interaction During Pulsed Plasma Deposition of Zinc Oxide. |
| 6 | Hammad Subhani17-MS-FT-AMD-18 | Dr. Nazeer Ahmed Anjum | Investigation of Stress Corrosion Cracking in Heat Treated Weldments of Dissimilar Stainless Steel.  |
| 7 | Muhammad Faizan Zafar18-MS-FT-TSE-01 | Dr. Muzaffar Ali  | Thermal Stability Analysis of Metallic Oxides Based Nanofluids in Compound Parabolic Collector.  |
| 8 | Hafiz Muhammad Yasir Saleem17-MS-PT-AMD-04 | Dr. Nazeer Ahmed Anjum | Experimental Characterization of Different Filler Metals in Stress Corrosion Cracking for Dissimilar Weldments of Stainless Steel.  |
| 9 | Ahmad Altaf17-MS-PT-AMD-02 | Dr. Nazeer Ahmed Anjum | Study the Effect of Temperature and Chloride Concentration on Stress Corrosion Cracking in Dissimilar Stainless Steel Weldment.  |
| 10 | Muhammad Bilal Noumani16-MS-PT-AMD-13 | Dr. Azhar Hussain | Design and Development of Heat Exchanger to Study the Effect of Preheated Air on Engine Performance and Exhaust Gas Emission of a 4-Stroke Diesel Engine. |
| 11 | Imran Nawaz17-MS-FT-AMD-14 | Dr. Nazeer Ahmed Anjum | A Study of Stress Corrosion Cracking of Tungsten Inert Gas Welded Aluminum Alloy.  |
| 12 | Sajjad Ahmad17-MS-PT-P&G-14 | Dr. Azhar Hussain | Combustion Efficiency Analysis of Internal Combustion Engine Using Fuel Pre-Injection with Intake Air.  |
| 13 | Tanzeel ur Rehman17-MS-PT-PE(H)-06 | Dr. Abid Hussain | Comparative Analysis of Temperature Excursion Hybrid Techniques for Electronic Devices.  |
| 14 | Sohaib Nazar17-MS-PT-PE(H)-05 | Dr. Abid Hussain | Hybrid Thermal Management of Heating Element using Forced Air Convection and Nickel Foam Saturated with Phase Change Material.  |
| 15 | Muhammad Khalil17-MS-P-PE(T)-11 | Dr. Abid Hussain | Energy Improvement Strategies in Coal Fired Chain Grate Boiler. |
| 16 | Mujahid Iqbal17-MS-PT-AMD-15 | Dr. Azhar Hussain | Design Modification of Diesel Engine to Use Air and Fuel Mixture. |
| 17 | Fawad Yousaf Malik17-MS-PT-AMD-13 | Dr. Nazeer Ahmed Anjum | Investigation of Stress Corrosion Cracking in Titanium Alloy (Ti6Al4V) After Surface Treatment. |
| 18 | Omar Ayub17-MS-PT-PE(T)-09 | Dr. Muzaffar Ali  | Design Optimization of Multiple Variants of Compound Parabolic Collector Reflector Geometry and Receiver. |
| 19 | Muhammad Ali17-MS-PT-P&G-24 | Dr. Nazeer Ahmed Anjum | Design, Fabrication and Performance Evaluation of Walk Behind Garden Tiller.  |
| 20 | Hajra Asif18-MS-FT-AMD-05 | Dr. Muhammad Ali Nasir | Design & Characterization of Nano-Sensors Based Based Network Smart Hydrogel.  |
| 21 | Muhammad Irfan17-MS-PT-P&G-02 | Dr. Waqar Ahmed Qureshi | Finite Element Analysis of Wear for General Elliptical Contacts.  |
| 22 | Omar Ayub17-MS-PT-PE(T)-09 | Dr. Muzaffar Ali  | Design Optimization of Multiple Variants of Compound Parabolic Collector Reflector Geometry and Receiver. |
| 23 | Afaq ul Hassan17-MS-PT-P&G-05 | Dr. Muddassir Ali | Mathematical Modeling of Enhanced Oil Recovery via Surfactant Flooding From Conventional Reservoir. |

**Item No. 3. Panel of External Examiners for PhD Final Defense**

Board recommended the following Panel of External Examiners for PhD Final Defense of Research Scholar **Luqman Ahmed Nizam** Reg. No. **14-UET/PhD-ME-87.**

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| **Sr. No.** | **External Examiner Name** | **Designation and Affiliation** |
| 1. | Dr. Dur Muhammad Pathan | Professor and Chairman, Department of Mechanical Engineering, Mehran University of Engineering and Technology, Jamshoro |
| 2. | Dr. Muhammad Tufail | Professor and Pro Vice Chancellor, NED University of Engineering and Technology, Karachi |
| 3. | Dr. Muhammad Arif | Associate Professor, Department of Mechanical Engineering, Institute of Engineering and Fertilizer Research, NFC Faisalabad |
| 4. | Dr. Asif Hussain Malik | Deputy Chief Engineer (Mechanical), KRL, Kahuta, Rawalpindi. |

**Item No. 4**. **PhD Admissions Semester Fall-2019**

Board recommended the admission for following PhD Candidates in Mechanical Engineering Department.

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| **Sr. No.**  | **Name of Candidate** | **Supervisor** |
| 1 | Umair Saleem | Dr. Abid Hussain  |

**Item No. 5.** **Change of PhD Supervisor**

Board recommended to assign the following Supervisor and Co-Supervisor for following PhD Scholars due to EOL of Dr. Hafiz Muhammad Ali.

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| **Sr. No.**  | **Scholar Name** | **Previous Supervisor** | **New Supervisor**  | **New Co-Supervisor** |
| 1 | Fazle Hadi13-UET/PhD-ME-77 | Dr. Hafiz Muhammad Ali  | Prof. Dr. Riffat Asim Pasha  | Dr. Hafiz Muhammad Ali  |
| 2 | Zulfiqar Khattak13-UET/PhD-ME-78 | Dr. Hafiz Muhammad Ali  | Dr. Muhammad Ali Nasir  | Dr. Hafiz Muhammad Ali  |
| 3 | Asif Khan15-UET/PhD-ME-98 | Dr. Hafiz Muhammad Ali  | Dr. Muddassir Ali  | Dr. Hafiz Muhammad Ali  |
| 4 | M. Yasir Hussain19-UET/PhD-ME-17 | Dr. Hafiz Muhammad Ali | Dr. Aneela Wakeel | Dr. Hafiz Muhammad Ali |

Board also recommended to change the Supervisor and assign new Supervisor ad Co-Supervisor of PhD Scholar **Mr. Farrukh Mazhar**.

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| **Sr. No.**  | **Scholar Name** | **Previous Supervisor**  | **New Supervisor** | **New Co-Supervisor** |
| 1 | Farukh Mazhar11-UET/PhD-ME-71 | Prof. Dr. Ahmad Chaudhary | Dr. Muhammad Shehryar | Prof. Dr. Ahmad Chaudhary |

**Item No. 6.** **Change of MSc Supervisor**

Board recommended changing the research supervisor for following MSc Scholars due to non availability of Dr. Hafiz Muhammad Ali.

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| **Sr. No.** | **Name and Registration** | **Previous Supervisor** | **New Supervisor** |
| 1 | Sohail Arshad 15-MS-PT-P&G-03 | Dr. Hafiz Muhammad Ali  | Dr. Muzaffar Ali  |
| 2 | Muhammad Aamer Hayat 17-MS-PT-PE(T)17 | Dr. Hafiz Muhammad Ali | Engr. Zahid Suleman Butt |
| 3 | M. Shoaib Rafiq 17-MS-PT-PE(T)-21 | Dr. Hafiz Muhammad Ali | Prof. Dr. Amir Sultan |
| 4 | Saad Iqbal 16-MS-PT-TSE-07 | Dr. Hafiz Muhammad Ali | Prof. Dr. Riffat Asim Pasha |
| 5 | Muhammad Uzair Shah 17-MS-PT-TSE-16 | Dr. Hafiz Muhammad Ali | Engr. Abdul Mobeen |
| 6 | Saifullah Khalid 17-MS-PT-TSE-15 | Dr. Hafiz Muhammad Ali | Dr. Muhammad Ali Nasir |

The meeting ended with the vote of thanks to the chair.

***DIRECTOR, PGS***

***CHAIRMAN***