DPE MIRROR

APRIL 2024



FIPI PDEU STUDENT CHAPTER WINS THE "BEST STUDENT CHAPTER AWARD"

AT THE ANNUAL CONVENTION OF FIPI 2024

DEPARTMENT OF PETROLEUM ENGINEERING GETS AICTE APPROVAL FOR THE COURSE FOR 3 YEARS

- Conferences
- Student Chapter
 Activities
- News
- Placements

- Student Centric Activities
- Technical Articles
- Non-Technical Articles
- GATE Performance

DIRECTOR'S & HOD'S DESK



Prof. (Dr.) Anirbid Sircar
Director
School of Energy Technology

We are delighted to welcome you to this edition of the DPE Mirror. As we explore the achievements, progress, and ambitions within our department, it's clear that we remain a pinnacle of excellence in the field of petroleum engineering.

The DPE Mirror is a publication created by students, for students, and we would greatly appreciate your help by sharing images of your industrial training endeavors, which we may feature in future issues.

I extend my gratitude to the entire PDEU faculty, students, staff, and alumni—for your unwavering dedication and contributions. Together, we continue to shape the future of petroleum engineering.



Dr. Uttam Kumar Bhui

HoD

Department of Petroleum Engineering
School of Energy Technology

Over the past year, our department has marked significant milestones in academia and research. The tireless efforts of our faculty and the steadfast dedication of our students have led to pioneering advancements in petroleum engineering. From publications in prestigious journals to achieving top ranks in Gate exams, these achievements reflect our commitment to pushing the limits of knowledge.

At the core of our department is a culture of innovation. We have cultivated an atmosphere that fosters exploration, embraces challenges, and sparks creative solutions.

I'd also like to extend warm congratulations to the team behind the DPE Mirror. We hope you find this issue enlightening and enjoyable to read.

EDITOR'S DESK



Dr. Namrata Bist Rawat



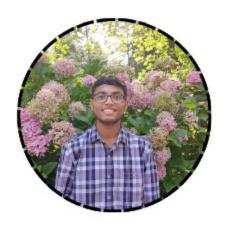
Mr. Gaurav Hazarika

Each year presents its own set of opportunities, and the past year was no exception. Our department within the School of Energy Technology has established a high standard for future cohorts to strive towards.

As we drafted the initial version of the magazine, it became evident that our department had reached significant milestones. From success in Gate exams to participation in conferences, from hosting online events to organizing festivals, and from educational field trips to insightful industrial visits, the magazine offers a comprehensive overview of recent events and within activities the department. Despite challenges of transitioning from a school to a department, the unwavering dedication of both students and faculty toward excellence has been commendable. In the pages ahead, we have endeavored to cover as many events as possible while maintaining a focus on honesty and accuracy in our content delivery.

We extend our gratitude to all the students on the Editorial Team for their perseverance in crafting the magazine. Without their assistance, timely delivery would not have been possible. Additionally, the individuals within the department have played a pivotal role; without their contributions, this magazine would lack significance.

EDITORIAL TEAM



Vivek Kumar Yadav



Pratham Kumar



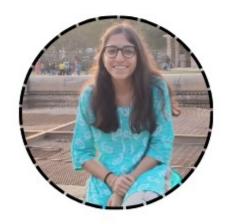
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CONTENT

07

Cover Story

Fueling Excellence: FIPI PDEU Student Chapter Triumphs at the Annual Convention of FIPI

13

GATE Achievements

GATE Achievers of 2024

20

Vibrant Gujarat

PDEU Shines at Vibrant Gujarat Global Summit 2024

39

Technical Article

Enhancing Operational Resilience: The Role of Internal Audit and Risk Advisory in the Oil and Gas Industry

Decarbonisation and future energy systems in the oil and gas industry 09

Student / Faculty Achievement

Accomplishments achieved by the students and faculty of PDEU

15

Placements

Notable Placements from department of Petroleum Engineering (Batch 2020-24)

22

Student Centric Activities

Geological Field Trip

10

Media Blitz

News related to PDEU

17

Conferences

India Energy Week TPTC OTC Asia

24

Student Chapter Events

FIPI SEG-SPG-EAGE SPE IADC

COVER STORY

Written by: Aastha Maurya, Harsh Jani Edited by: Vivek Yadav

"Fueling Excellence: FIPI PDEU Student Chapter Triumphs at the Annual Convention of FIPI "

The 12th Annual Convention of FIPI with the theme "Pathways of Hydrocarbon Industries on Its Journey Towards Net Zero", hosted by FIPI India and Rajiv Gandhi Institute of Petroleum Technology (RGIPT) in Raebareily, Uttar Pradesh from 3rd – 4th April, 2024.

The Convention provides a platform to the students to interact, compete with various universities and share knowledge with each other and also an opportunity to listen and network with the industry experts. Therefore, On 3rd April, a Panel Discussion was organized where the esteemed panelists, including Shri Kallol Saha from SNP Global, Prof. G. Suresh Kumar from IIT Madras, Dr. Rabi Bastia from Oil Max Energy, Shri DLN Shastri from FIPI, Shri Mainak Ray from HMEL, and Prof. ASK Sinha, Director of RGIPT, who offered their valuable insights into the challenges and opportunities of transitioning toward net-zero emissions in the hydrocarbon sector.

On 4th April, The Annual Convention was graced by distinguished guests, including Mr. N. Chandrashekhar, Executive Director-Head (R&D) at BPCL, and Mr. Rajesh Singh, Executive Director (UPSO I) at IOCL. The Students delegates representing FIPI Student Chapter of their respective universities such as UPES Dehradun, PDEU Gandhinagar, JNTU Kakinanda, Dibrugarh University, IIT(ISM) Dhanbad, Amrita Vishwa Vidyapeetham, RGIPT, were asked to present against the judges about various events, projects, and activities organized by their Student Chapter throughout the academic year.



FIPI PDEU Students at the 12th Annual Convention at Rajiv Gandhi Institute of Petroleum Technology (RGIPT)

"We are not merely students; we are catalysts of change, igniting the path towards a sustainable energy future," remarked FIPI PDEU SC who showcased its exceptional dedication in pursuing the Vision and Mission by standing with the motto 'Energy, Enthusiasm and Excellence'. FIPI PDEU, through the mesmerizing lens of their presentation, unveiled their illuminating Guest Lectures, Seminars, Workshops, Social Initiatives, etc conducted throughout the academic year. FIPI PDEU captivated audiences and judges alike with their innovative approaches to addressing pressing challenges in the petroleum industry. Hence, FIPI PDEU Student Chapter was declared as the Winner of the 12th Annual Convention of FIPI and was honored by 'The Best Student Chapter Award'.

As we come together to honor this amazing accomplishment, let's not just applause for FIPI PDEU's victory, but also promise to always strive for the best in everything we do. Because when we succeed, it inspires us all to work harder and reach for greatness. PDEU's win is like a spark that lights up the path to a better world, where we can all thrive in a sustainable way. Let's take this success as a reminder to keep pushing forward, towards a brighter future.



FIPI PDEU Student Chapter winning the "Best Student Chapter Award"

STUDENT / FACULTY ACHIEVEMENT

Written & Edited by: Vivek Yadav



Rahul Sirvi was conferred with the Best Presentation Award at the prestigious 3rd International Symposium in CTAC-2023 held at Bhabha Atomic Research Center (BARC), Mumbai. This recognition by the American Chemical Society (ACS).

Rahul is currently a PhD student under the guidance of Dr. Uttam Kumar Bhui (HoD - Department of Petroleum Engineering, School of Energy Technology, PDEU).



Dr. Rohit Srivastava had the honor of receiving an invitation to deliver an Invited Talk on "Green Hydrogen" and chair a session at the 8th International Conference on Catalyst and Chemical Engineering (CCE-2024). Held in Boston, MA, from February 24th to 28th

Dr. Rohit Srivastava had the opportunity to explore various esteemed institutions in the United States of America. His itinerary included visits to Harvard University in Cambridge, Massachusetts, Arizona State University (ASU) in Tempe, Arizona, and North Carolina A&T State University highlighting the invaluable exchange of ideas and insights in the realm of Green Hydrogen.

MEDIA BLITZ

Written by: Misha & Swattik Edited by: Vivek Yadav



PDEU AT IEW 2024

PDEU exhibited in India Energy Week 2024, held in Goa from 4-9 February 2024, the cutting edge research happening in PDEU along with its in-house solar manufacturing plant, additive manufacturing centre to cater the needs of energy security of India.



PROF. DR. ANIRBID SIRCAR MESSAGE TO DEW JOURNAL

Prof. Dr. Anirbid Sircar, Director, School of Energy Technology, PDEU talking to the DEW Journal at the India Energy Week (IEW) 2024 in Goa, informed about the extensive research at the university's 16 centre of excellence, which are sponsored by various funding agencies. The centres he informed are carrying out 62 projects funded externally, earned 250 patents, and have 850 publications to their credit, which is a record for a university.

PDEU SIGN MOU WITH NFSU DATE- 19/02/2024

Pandit Deendayal Energy University (PDEU), Gandhinagar, and National Forensic Science University (NFSU), Gandhinagar, have joined hands in a new partnership! Signed an MoU on February 19, 2024, to enhance collaborative research, faculty and student exchange, and to make the best use of our combined resources.





INTERNATIONAL CONFERENCE ON OIL & GAS FOR ENERGY SECURITY 2024

ICOGES 2024 was organised by department of petroleum engineering, school of energy technology, PDEU. It was a two day conference held during 16-17th February 2024, eyed upon facilitating the convergence of academic, policy makers, regulators, innovators, industry experts and investors. The event served as a platform for these diverse stakeholders to share their insights, offer stimuli, and contribute to the discourse around energy security



INAUGURATION OF PETROCHEMICAL PROJECT IN GUJARAT BY PM MODI

PM Modi inaugurates on 23th March 2024, a transformative petrochemical project worth Rs 20,600 crore in Gujarat, signalling a major leap in India's petrochemical sector. This strategic investment underscores our commitment to progress and development, catering to the diverse needs of our nation



MINISTRY OFFICIAL VISITS PDEU GANDHINAGAR

Mr. Pankaj Jain, Secretary - Ministry of Petroleum and Natural Gas, Government of India at our university, PDEU Gandhinagar.

During his visit on 28th March 2024, we got an opportunity to showcase our ground breaking work of our research group in producing green hydrogen from seawater.



DEPARTMENT OF PETROLEUM ENGINEERING STUDENTS TRIUMPH AT INTRA CUP

Intra Cup organized by sports committee PDEU was won by department of petroleum engineering which was held on 9th April 2024 against Electrical Engineering.

LEADERSHIP TALK SPARKS INSPIRATION AT SOUL-PDEU EVENT DATE- 12/04/2024

An inspiring talk on Leadership by Mr. Jinal Mehta, CEO & MD of Torrent Power and BoG member of PDEU. Organized by SOUL in collaboration with PDEU, with the presence of Dr. Hasmukh Adhia, IAS, Vice-Chairman of BoG was held on 12th April 2024.



www.soul-india.org







PDEU PANDIT DEENDAYAL EN ERGY UNIVERSITY

DEPARTMENT OF PETROLEUM ENGINEERING GETS AICTE APPROVAL FOR THE COURSE FOR 3 YEARS. THIS IS FIRST TIME IN THE HISTORY OF PDEU THAT A COURSE HAS RECEIVED 3 YEARS OF EXTENSION.

GATE ACHIEVERS 2024

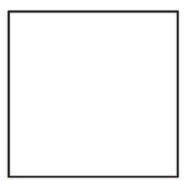
Written by: Mohit Pandya Edited by: Pratham Kumar



Ayush Katyare AIR 06 BATCH OF 2019



Mihir Panchal AIR 07 BATCH OF 2018



Md. Shehbaz Shaik AIR 33 BATCH OF 2018



Kunal Nagdev AIR 37 BATCH OF 2019



Harsh Patni AIR 71 BATCH OF 2020



Jatin Panchal AIR 76 BATCH OF 2020



Hardev Sindha AIR 98 BATCH OF 2020



Mohak Kotak AIR 158 BATCH OF 2020



Devansh Gajjar AIR 163 BATCH OF 2020



Harsh Gupta AIR 170 BATCH OF 2020



Meet Chaklasiya AIR 186 BATCH OF 2020



Het Patel AIR 200 BATCH OF 2020



Lokesh Dadheech AIR 222 BATCH OF 2020



Ankit Ilavya AIR 222 BATCH OF 2020



Jay Patel AIR 227 BATCH OF 2020



Shivang Bodhanwala AIR 244 BATCH OF 2020



Yashvardhan AIR 244 BATCH OF 2020



Vineet Darji AIR 248 BATCH OF 2020



Maharishi Soni AIR 275 BATCH OF 2021



Aarzoo Jobanputra AIR 282 BATCH OF 2021



Swastik Mazumder AIR 283 BATCH OF 2021



Aashish Dadwani AIR 288 BATCH OF 2021



Pratham Patel AIR 292 BATCH OF 2020



Lalji Panchal AIR 308 BATCH OF 2020



Daksh Joshi AIR 308 BATCH OF 2020



Megh Soni AIR 319 BATCH OF 2020



Parva Bagdai AIR 349 BATCH OF 2020



Sumit Patel AIR 349 BATCH OF 2020



Swattik Sil AIR 397 BATCH OF 2021



Pradip Chauhan AIR 430 BATCH OF 2021



Sumit Tirgar AIR 540 BATCH OF 2020

DPE PLACEMENTS 2023-24

Edited by: Pratham & Neel









HALLIBURTON



DEVANSH M. GAJJAR



HARSH GUPTA



PARTH M. SHUKLA



ANKIT ILAVYA

RELIANCE INDUSTRIES









SHELL







PIYUSH SHARMA SRIDHAR APPAPANTHULA MOHMMADKAIF MANSURI HRIDAYANSH TIWARI



EDIGLOBE



SHIVANG K. BODHANWALA



MEGH M. SONI



MOHAK K. KOTAK





SAHIL D. PANWALA

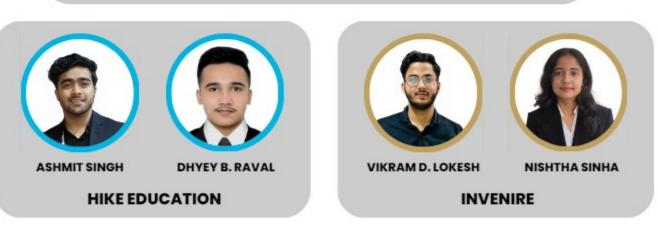


KAWANPREET S. LABANA

SUVIRA ENERGY









NATIONAL AND INTERNATIONAL CONFERENCES Written by: Ananya Very

Written by: Ananya Verma, Rajvi Suthar Edited by: Neel Rana

India Energy Week

India's unwavering commitment to developing sustainable energy solutions is embodied by India Energy Week 2024, which takes place in Goa from February 6–9, 2024. It was the biggest energy conference in the nation, bringing together important players from the energy sector to support India's aspirational goals for the transition. The occasion created a foundation for a more environmentally friendly future by encouraging cooperation, innovation, and knowledge sharing among specialists, politicians, and leaders in the sector. Pandit Deendayal Energy University (PDEU) stood out amid the lively energy debates and cutting-edge discoveries, showcasing its dedication to quality and leadership in the energy industry. The following six outstanding students represented PDEU with distinction: Tithee Bhavsar, Pariket Pansara, Kishan Patel, Kanchal Soni, Rahi Mehta, and Tanisha Varia.

They demonstrated not only the institution's commitment to developing talent but also the enthusiasm and knowledge of its student body in advancing sustainable energy solutions. Accompanying PDEU's bright student representatives were esteemed leaders, each contributing significantly to the university's success. Dr. Anirbid Sircar, Director of the School of Energy Technology, led with visionary guidance, propelling PDEU to the forefront of energy education and research. Dr. Uttam Kumar Bhui, Head of the Department, shaped the academic curriculum to meet industry needs, while Dr. Rakesh Vij, Director of Placement, facilitated industry connections for student success. Dr. Bhawanisingh Desai, Dean of Research and Development, drove initiatives pushing energy research boundaries, and Gaurav Hazarika, Assistant Professor, mentored students, fostering excellence within PDEU. Together, this dynamic ensemble from PDEU left a lasting impression at IEW 2024, actively engaging in insightful discussions, fostering valuable partnerships, and inspiring others with their commitment to sustainable energy solutions. As India progresses towards a greener future, PDEU reaffirms its dedication to driving innovation and shaping the energy landscape for future generations.





International Petroleum Technology Conference (IPTC)

3 students from Pandit Deendayal Energy University, Vishal Kumar Bhoi, Vraj Maheshbhai Patel and Kanchal Soni were selected to participate in the Education Week Program of 2024, however, only Vishal Bhoi received the opportunity to witness the International Petroleum Technology Conference (IPTC) that was scheduled in Dhahran, Saudi Arabia from 12th to 14th February 2024. At the IPTC Education Week, 100 students from 33 countries formed 16 groups for diverse activities, blending learning and networking. They participated in technical sessions, discussions with industry experts, and field trips to major companies. On Day 1 of the education week, students embarked on the Techno Valley Field Trip, rotating through various organizations such as AIR PRODUCTS, Baker Hughes, King Fahd University of Petroleum & Minerals (KFUPM), and NESR. This was followed by an opportunity to immerse themselves in the rich Saudi culture and tradition at the Heritage Village. Day 2 was Speed Networking & Career Guidance Session; this session was to give students an opportunity to casually interact with professionals in the industry and ask their burning questions in a smaller round-table format. Participating professionals included the IPTC YMA Committee as well as other IPTC volunteers. Then a session on "From Emissions to Ambitions: The Role of CCS & CCE in Tackling the Energy Trilemma and Achieving Net Zero Ambitions" followed by 'Unlock the Reserves' Field Development Challenge by SLB, that served as a significant highlight. Collaborating with their respective teams, students navigated the complexities of oil field development, mastering various software tools such as PETREL, PIPESIM, INTERSECT, and IAM. The challenge primarily focused on developing a profitable field development plan, including surface facilities.







Offshore Technology Conference Asia (OTC Asia)

It is a colossal prestige for PDEU as one of our final year students Mr. Raiwant P. Modh received an opportunity to participate in the University Student Programme at the eminent Offshore Technology Conference Asia (OTC Asia) 2024, in Kuala Lumpur, Malaysia, from February 27 to March 1, 2024. The OTC Asia committee selected 27 students worldwide, wherein 4 were Indian students from prominent petroleum universities. The Programme aimed to give undergrad students the opportunity to engage, interact, and learn from the eminent industry professionals through panel discussions, technical sessions, brainstorming etc. The session focused on discussing about "Excellence in Asia: Energizing Now and for the Future," covering Industry trends, Future energy technologies, Decarbonization efforts, CCUS projects, and Energy market sustainability in the Asia Pacific region based on the UNSDGs. The DE&I Insights Programme, themed "Breaking Barriers, Building Bridges: Harnessing the Power of Diversity in the Energy Industry," explored the key issues and provides high-level recommendations on the progress, future initiatives, and direction of DE&I for the energy industry.





VIBRANT GUJARAT

Written by: Yash Kumar Edited by: Neel Rana

PDEU Shines at Vibrant Gujarat Global Summit 2024

Pandit Deendayal Energy University (PDEU) made a remarkable presence at the Vibrant Gujarat Global Summit 2024, held from 9th to 13th January. The university's stall was a testament to its commitment to innovation and research in the energy sector, aptly encapsulated in the theme "Energy is reinventing itself".



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A Beacon of Innovation

PDEU, the only university to have a manufacturing plant, stall showcased a 45 MW solar panel assembly, a significant stride in harnessing renewable energy. This display was not just a symbol of technological advancement but also a reflection of PDEU's dedication to creating a sustainable future. The university also presented an International Automobile Center of Excellence, further demonstrating its innovative spirit and Next-Generation Computing Lab, emphasizing its focus on cutting-edge technology.

Leading the Way

PDEU's participation in the summit clearly showed that it is ahead of other universities in the field of innovation and research in the energy sector. The university's focus on practical, impactful research and its ability to translate this research into real-world solutions sets it apart.



Industry-Academia Collaboration

PDEU students Lokesh Dadheech, Tithee Bhavsar, Harsh Jani, and Aastha Maurya represented the university in the industry-academia collaboration with Shell Energy India Pvt Ltd. This partnership demonstrates PDEU's dedication to closing the knowledge gap between academics and industry.



POEU ITA

The Faces Behind the Success

The successful presentation of the stall was the result of the hard work and dedication of several key individuals. Prof. (Dr.) Nigam Dave, Director of SLS PDEU and Dean of International Relations of PDEU.

Dr. Uttam Kumar Bhui, HOD of SPT PDEU, and Dr. Bhawanisingh Desai, Dean of the R&D department of PDEU and Other faculty members of PDEU were the university's representative at the summit. Their leadership and vision were instrumental in showcasing PDEU's strengths and potential at this global platform.

STUDENT CENTRIC ACTIVITES

Written & Edited by: Vivek Yadav

Geological Field Trip



2022 BATCH STUDENTS AT KUAR BET, GREAT RANN OF KACHCHH; SEARCHING FOR SUN-RIFT SEDIMENTS



DR. BHAWANI SINGH DESAI IN THE FIELD



INTERNATIONAL STUDENTS AT THE FIELD VISIT



MIOCENE ROOTED HORIZON



THICK MASSICE SANDSTONE SHOWING RESERVOIR COMPARTMENTALIZATION





2022 BATCH STUDENTS FOR THE 2ND PHASE OF THE FIELD VISIT

Earth science and hydrocarbon field work for 4th-semester Petroleum Engineering students was organised in January and February 2024.

The students visited Kutch in the first part of the fieldwork. The students get accustomed to various geological formations, stratigraphic structures and adverse field conditions. The second part of the field trip happened near Dholeshwar Mahadev temple, Gandhinagar. During this phase, the students were given hands-on experience on geophysical instruments used for exploration of oil and gas in the subsurface.

The overall experience of the students has been enjoyable. The field trip has provided an opportunity for learning with fun.

STUDENT CHAPTER EVENTS

Written by: Rahul Sharma Edited by: Yash Bhatt

FIPI Events

Coalesce 6.0

Urja Sabha

FIPI PDEU SC successfully organized 'Urja Sabha', marking the inaugural event of 'Coalesce 6.0'. This event was made possible by the expert judgment and moderation of Dr. Sitakanta Mishra. Urja Sabha was organized in a mock-parliament style where two teams were divided as ruling and opposition parties. For the first round, both parties engaged in debate sessions delving into India's energy policy and securities. By the second round, a consensus was reached and a resolution was passed between the two for a sustainable, energy-sufficient future. This was a resounding success due to the high participation and enthusiasm shown by the contestants, making it a remarkable event.





Gas Grid

To understand the intricacies of the City Gas Distribution sector, FIPI PDEU conducted 'Gas Grid'. This event was graced by the presence of Dr. Anirbid Sircar, who served as our distinguished judge. During this competition, participants engaged in a brainstorming session where they answered a series of questions for the first round. Then, they showcased their financial bid by presenting their plans for CGD operations in Gandhinagar city. Each presentation was evaluated by Dr. Sircar sir. After an intense competition, the team that earned the highest score emerged victorious, and the winners were announced.





Artwork By RUCHIT SHAH

Digital Artwork

To unleash the creativity and to showcase the artistic prowess through digital media, 'Digital Artwork' as part of 'Coalesce 6.0' was organized. Participants showcased their artistic talents through digital media. We were delighted to receive a number of wonderful artworks, each offering a unique interpretation of the theme "Future Vision: Imagining Tomorrow's World."

All submissions were posted on Instagram, and the one that garnered the most likes was declared the winner. Their wonderful artwork made this event a success.

Geo - Swot

Geoswot, a geology challenge, kicked off with an electrifying first round, as students showcased their expertise in a rigorous general geology quiz. The atmosphere crackled with excitement as teams pitted their knowledge against each other, demonstrating their understanding of geological concepts and phenomena. In the second round, participants eagerly geared up for the thrilling geology treasure hunt. Armed with wit and geological insight, teams deciphered cryptic riddles, leading them to various geological specimens scattered throughout the venue. With each successful identification, their confidence surged.

Enerland

As an energy consultant, the task was to develop an optimal energy solution for the hypothetical country 'EnerLand,' which faced significant challenges such as rapid population growth, urbanization, and increasing energy demand. Throughout the project, the goal was to maximize energy output through renewable energy sources while minimizing dependence on fossil fuels. Extensive research, analysis, and collaboration were key components of the process as we navigated through various potential solutions. Strategies were devised and refined, considering factors such as geographical features, technological advancements, and governmental policies. Ultimately, the comprehensive energy plan was presented to stakeholders, incorporating innovative approaches to meet the energy needs of 'Enerland' sustainably.





Core - AL

"Core AI," an event tailored around the intricate realm of core analysis, unfolded as a captivating challenge for participants eager to test their knowledge and prowess in the field. The atmosphere buzzed with anticipation as contestants delved into a quiz brimming with questions meticulously crafted to probe their understanding of core analysis.

ASPIRE LAUNCH

FIPI PDEU SC, with great pleasure, launched the 5th edition of Aspire, the Annual Magazine of FIPI PDEU Student Chapter which includes a compilation of insightful articles, captivating events, and memorable moments that embody the spirit of our organization. To fuel the intellectual prowess, students showcased their knowledge and innovative ideas regarding oil and gas industry via exhibiting a technical article or research paper on the dynamic landscape of the energy sector which are published in this exclusive magazine.



PetroPremier

To have a cinematic experience, FIPI PDEU SC organized Petropremiere which was a captivating two-day movie screening event. In this event we showcased two movies respectively each day such as "The Finest Hours" and "The Burning Sea". This event played a crucial role in providing students with the cinematic taste of the oil and gas industry.

Intern Talk

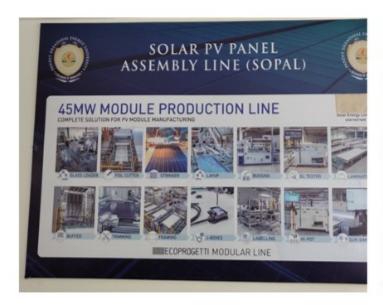
The "Intern Talk" was arranged by FIPI PDEU SC in collaboration with SPE, IADC, and SEG-SPG-EAGE PDEU SC. Final-year students had the chance to converse with their juniors about their internship experiences during this event. They provided beneficial insights into the real-world dimensions of working in their different areas by outlining the necessary requirements, the internship procedure, and their own personal experiences. They also discussed the industrial and practical expertise offered by businesses like Halliburton, Cairn, DGH, ONGC Asset, ONGC IRS, and so on.





SOPAL Visit

FIPI PDEU SC effectively arranged a visit to the SOPAL panel manufacturing line located in the knowledge corridor near PDEU. The young minds were exposed to the manufacturing process of solar panels through this event, starting with "assembly," moving on to quality control, and concluding with packaging. Students learned plenty from this event about the manufacturing process as a whole as well as about the assembly of solar panels.





SPE EVENTS

IOGCA Conference

The SPE PDEU Student Chapter along with Knowledge Partner PDEU organized the "Internation Oil & Gas Chemistry, Chemical & Additives Conference (IOGCA)" on 12th &13th September 2023. This event served as a dynamic platform for the exchange of ideas, insights, and expertise in the field of oil and gas exploration and production. The conference brought together professionals, academics, and students to explore the latest advancements, challenges, and opportunities in the industry.

The conference was graced by esteemed dignitaries including Dr. Anil Kumar Dubey, Director, SPRERI; Dr. Aastha Pandey, Associate Professor and Head (NFSU); Professor Dinesh Kumar, Nodal Officer of the Centre of Innovation and Fabrication (CIF) at CUG and Dr. Soumen Dey, Assistant Professor at the Central University of Jharkhand, Ranchi. Additionally, the event was attended by numerous distinguished industrial experts. Distinguished academic members were present at the meeting in addition to these well-known individuals, including Prof. Dr. S. Sundar Manoharan, Director General of PDEU, and Prof. Dr. Anirbid Sircar, Director SOET of PDEU.

The event commenced with the introduction emphasizing the significance of conference, the primary objective of the IOGCA conference was to provide a platform for knowledge sharing, collaboration, and networking within the oil and gas community. By facilitating discussions on topics ranging from exploration and production to sustainability and innovation, the conference aimed to foster a deeper understanding of the dynamics shaping the industry.

In conclusion, the IOGCA conference was a resounding success, attracting participants from diverse backgrounds and fostering meaningful dialogue within the oil and gas community. By bringing together industry stakeholders, researchers, and students, the conference served as a catalyst for innovation, collaboration, and knowledge exchange. As we reflect on the insights gained and connections made during the conference, we look forward to building upon this momentum to address the evolving challenges and opportunities in the oil and gas sector.





Cross campus connect

In the realm of academia, where knowledge is the greatest currency, the "Cross Campus Connect" event served as a beacon of collaborative learning. This virtual event, organized by the SPE PDPU Student Chapter in collaboration with the SPE VIT Student Chapter, was a testament to the power of shared experiences and the impact they can have on shaping the future of young minds. The event was a confluence of final-year students from SPE PDEU and SPE VIT, who came together to share their enriching internship experiences. The aim was to empower juniors with real-world insights for a brighter future.

The platform facilitated an engaging dialogue, with participants providing detailed insights into their internships. This event not only fostered a collaborative learning environment but also encouraged active engagement from all participants. The event was a resounding success, connecting students from both the campuses and allowing them to learn from each other's professional experiences. The feedback was overwhelmingly positive, with participants expressing their appreciation for the insights gained and the opportunity to network with their peers.

In conclusion, the "Cross Campus Connect" event was a shining example of how shared experiences can enhance learning and foster a sense of community among students, paving the way for a brighter future for all involved.





Energy Shots

The SPE PDEU Student Chapter took a proactive approach to keep its members and followers well-informed about the dynamic landscape of the Oil and Gas Industry through its initiative called EnergyShots, which was shared on the official student chapter Instagram account of SPE PDEU. EnergyShots served as a weekly digest, meticulously curated to capture the latest developments and trends shaping the industry worldwide.

One of the primary objectives of EnergyShots was to provide a convenient and concise source of information.

One of the primary objectives of EnergyShots was to provide a convenient and concise source of information, ensuring that individuals could stay updated on industry happenings without the need to sift through multiple publications. By condensing the news into bite-sized updates, EnergyShots offered a quick glance into the most significant events, innovations, and trends emerging within the Oil and Gas sector.

By consistently delivering relevant and timely content, EnergyShots not only kept the audience engaged but also fostered a sense of community within the SPE PDEU Student Chapter. Through this initiative, members were empowered with the knowledge and awareness necessary to stay abreast of industry developments, thereby contributing to their professional growth and enrichment.

ICOGES 2024

The Petroleum Engineering department at SoET, PDEU organized the International Conference of Oil & Gas for energy security ICOGES on February 16th & 17th February 2024. One of the primary organizers of the ICOGES conference was the SPE PDEU Student Chapter. The primary goal of the ICOGES conference was to provide immediate, reliable, and cost-effective access to oil and gas, which is critical for the well-being of the world's growing population. To sustain a growing population, it is critical to transition to an energy system based primarily on renewable sources, while also mitigating remaining carbon emissions.

The conference began with an introduction emphasizing the importance of the conference, which was followed by various lectures by guests. The conference's theme, "Competencies and technology for a safe and long-term energy security," captured the significant contribution made by Oil and Gas community to the societies in which we live and work.





Guest Lectures by SPE PDEU SC

Gas Lifting troubleshooting & optimizing

SPE PDEU Student Chapter organized a guest lecture on "Gas Lift: Troubleshooting and Optimization" on 18th October 2023. This enlightening lecture was delivered by Mr. Hardik Vyas, who currently working as an AEE (Production) at ONGC Assam asset with more than 4 years of experience in the industry.

Throughout the lecture, Mr. Vyas delved into the intricacies of gas lift operations, elucidating the underlying principles and mechanisms involved. He highlighted the significance of gas lift in enhancing oil and gas production rates, particularly in wells with declining reservoir pressure. He outlined various problems typically encountered during gas lift operations like gas interference and liquid loading to valve malfunctions and tubing leaks leading to decreased efficiency and production downtime.

Technology Infusion in Oil & Gas sector

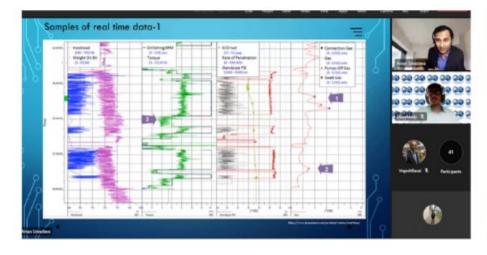
SPE PDEU Student Chapter hosted a Guest Lecture on the topic "Technology Infusion in the Oil and Gas Sector" in virtual mode. This emphasizing lecture was delivered by Mr. Nitin Lakhar, Oil India's Reservoir Superintendent Engineer. He is also a Student Chapter Liaison for the SPE New Delhi Section.

Mr. Nitin shared his insights on current technological developments and their effects, and involvement in the oil and gas industries. He discussed an insightful overview of the challenges faced by the oil and gas sector, including increasing operational costs, environmental concerns, and the need for greater efficiency. Various emerging technologies were discussed, such as Artificial Intelligence (AI), Internet of Things (IoT), Robotics, and Data Analytics. He also emphasized how these technologies are being infused into different aspects of the industry to optimize operations, enhance safety measures, and minimize environmental impact.

Digital Oilfield & Transformation

SPE PDEU Student Chapter organized a Guest Lecture on "Digital Oilfield and Transformation". It was held in virtual mode using MS Teams. The session aimed to explore how digitalization is reshaping traditional oilfield operations and driving efficiency, safety, and sustainability.

The speaker of enlightening guest lecture was Mr. Aman Srivastava who is currently serving as a Product Owner at Halliburton, USA. He has been a part of the industry since 2008 and has many publications to his name. Mr. Aman began by elucidating the concept of the digital oilfield, emphasizing its core components, such as data acquisition, analysis, visualization, and decision-making support systems. Various digital technologies, including Internet of Things (IoT), Big Data Analytics, Artificial Intelligence (AI), and Cloud Computing, were discussed in the context of their integration into oilfield operations. He highlighted how these technologies are enabling real-time monitoring, predictive maintenance, and optimization of production processes.





SEG EVENTS

PANEL DISCUSSION ON "SUSTAINABILITY OF OIL AND GAS TRANSITION

SEG-SPG-EAGE PDEU Student Chapter conducted a panel discussion titled 'Sustainability of the Oil & Gas Industry in Energy Transition on 24th April 2024 which featured distinguished speakers Mr. Sanjoy Das and Mr. Umesh Kumar. Mr. Das, who is working as General Manager (GM)-Reservoir at IRS-ONGC, and Mr. Kumar, Deputy General Manager (DGM)-Reservoir at IRS-ONGC. They shed light on the crucial role of sustainability in the energy transition within the oil and gas sector. The session aimed to explore the global shift from fossil fuels to low-carbon energy sources like renewables, hydrogen, and nuclear power, while also addressing operational challenges effectively.

During the discussion on the sustainability of the oil and gas industry in the energy transition, we explored various aspects. It was highlighted that while the industry faces challenges due to its environmental impact, there's recognition of the need to adapt. Initiatives such as increasing investments in renewable energy, implementing carbon capture and storage technologies, and enhancing operational efficiencies were emphasized as crucial steps. The conversation underscored the importance of collaboration between industry stakeholders, policymakers, and environmental advocates to drive sustainable practices and ensure a smoother transition to a low-carbon future



VALEDICTORY

The valedictory Ceremony of the SEG-SPG-EAGE PDEU Student Chapters was organized on 24th April 2024. The faculty mentor Dr. Uttam Bhui , Dr.Amit varma, Mr. Sanjoy das(GM of IRS ONGC) and Mr.Umesh Kumar(DGM of IRS ONGC) attended Valedictory Ceremony. The Certificate of honour was awarded to all the Core Committee Members for providing the best performance and taking the Student Chapters to the greater extent. Mr. Megh soni has given a wonderful speech and were the last speech being the President of SEG-SPG-EAGE PDEU Student Chapters. All were very excited to know the New President and Vice-president. So they announced, Mr. Viren Patel as a New President of The SEG-SPG-EAGE PDEU STUDENT Chapters and Mr. Priyanshu Bodhanwala and Mr. Aditya Sonwani was elected as Vice-president. Then, Dr. Uttam Bhui has given an amazing speech which motivated all the participant.





IADC Events

WEBINAR ON DECODING CEOR



The lecture was hosted by Eric Chandrani on 6th January 2024 from 4:00 to 5:00 PM on MS Teams platform.

The speaker was Hitisha Dadlani, a senior reservoir engineer at ONGC Mehsana asset. She has an experience of over 6 years in the industry.

The topic of the lecture was Decoding CEOR, which stands for Chemically Enhanced Oil Recovery.

The lecture aimed to introduce the concept, mechanism, benefits, and challenges of CEOR methods, especially Alkaline-Surfactant-Polymer (ASP) flooding.

WEBINAR ON MATURE FIELD MANAGEMENT





On January 28, 2024, a detailed and insightful WEBINAR on Mature Field Management was conducted by Sayanima Kisku, an expert in the field of oil and gas management. Hosted between 3:00 PM to 4:00 PM on MS Teams, the session delved deeply into various strategies, challenges, and technological advancements associated with extending the life and optimizing the production of mature oil and gas fields. The webinar began with an introduction to Mature emphasizing Field Management, its growing importance in the current energy landscape where maximizing the output from existing fields has become crucial due to environmental concerns and declining new discoveries .

INDIA ENERGY WEEK 2024

6th FEB 2024

On the inaugural day of India Energy Week 2024, Hon'ble Minister of State, Ministry of Petroleum and Natural Gas, Government of India, and Ministry of Labour and Employment, Government of India, Rameswar Teli, visited the Convincer Chair Road Safety with AR/VR technology at ONGC IPSHEM premises on 6 Feb 2024. Alongside Honourable Minister Shri Rameshwar Teli, esteemed industrial experts including Shri Om Prakash Singh, Shri Ajay Dixit, Shri Narendra Jindal, Shri Arun Karle, Shri Deepak Agarwal, Shri Yogesh Mohite, Shri Ganesh Sonje, and Shri Jyoti Shekhar Shukla also visited the stall, immersing themselves in the immersive VR technology experience. Their presence underscored the significance of innovation and collaboration in driving forward safety initiatives within the energy sector.

Additionally, during the event, Meet Shah, a student from MIT and IADC SC, received a special gift from Mr. Zubair Khan, Vantage Drilling after the completion of day 1. This gesture holds significant importance as it acknowledges the students' contribution in representing IADC to industry experts who visited the event, promising a rewarding experience for the students involved.



Furthermore, students extended invitations to representatives from GDS Offshore and Onshore ONGC, including Shri V. V. Prasad and Desai Shri Amit Engaging in insightful interactions, they explored opportunities for collaboration and shared their experiences with the Convincer Chair technology. Additionally, Mr. Ajay Dixit, HSE Head of ONGC, also visited the stall, further emphasizing the importance of safety initiatives within the energy sector. These interactions not only showcased the students' proactive engagement but also fostered meaningful dialogue and collaboration between academia and industry. SHRI. PRASUN SINHA, CDS ONGC

7th FEB 2024

On day 2 of India Energy Week 2024, industry professionals continued to flock to the Convincer Chair Road Safety exhibit, eager to experience the AR/VR technology firsthand. Among them were officials from ONGC who visited the stall and immersed themselves in the Convincer Chair experience using Oculus glasses. Additionally, amidst the buzz of activity, Harsh Pandya stood out as he received a special gift from the SLB store, recognizing his significant contribution to the event. This acknowledgment further highlighted the importance of student involvement and showcased the collaborative spirit driving innovation within the energy sector.



8th FEB 2024

As day 3 unfolded, yet another distinguished industrial figure visited the Convincer Chair exhibit, further amplifying the importance of the innovative approach to road safety. This time, a student bravely took a seat in the Convincer Chair, donning the Oculus glasses, and embarked on a simulated journey through a real-time car accident, highlighting the effectiveness of AR/VR technology in promoting awareness and safety. In the meantime, students continued their proactive engagement, approaching various stalls to encourage industry officials to visit the IADC's stall and experience the Convincer Chair. They extended invitations to Cairn, Baker Hughes, SKO Solutions, Essar, Reliance, and many more exhibiting at India Energy Week 2024.



9th FEB 2024

On the culminating day, day 4, On the final day of India Energy Week 2024, the stall welcomed a distinguished visitor, Mr. Om Prakash Singh, Director T&FS, ONGC. Immersing himself in cutting-edge technology, Mr. Singh experienced firsthand the innovative AR/VR simulation using Oculus glasses. His presence brought invaluable insights as he provided feedback for enhancements, he envisions for IEW2025, slated to take place in Delhi. Mr. Singh emphasized the importance of integrating critical thinking among students by enabling them to create simulation models independently. These models, once presented to higher authorities, will foster collaboration and result in improved solutions.



Furthermore, he advocated for focusing on simulation models, particularly within the oil and gas industry, ensuring IEW2025 in Delhi sets new benchmarks for innovation and excellence. Amidst these discussions, officials from WOM Worldwide Oilfield Machine also visited the stall, eager to experience the Convincer Chair and AR/VR technology firsthand. Their interest further underscored the significance of safety initiatives and technological advancements within the energy sector, showcasing the widespread impact of such innovations across industry stakeholders.

TECHNICAL ARTICLE

Edited by: Yash Kumar

"Enhancing Operational Resilience: The Role of Internal Audit and Risk Advisory in the Oil and Gas Industry"

By: Ralwant Pankajkumar Modh (20BPE062)

In the dynamic and volatile landscape of the oil and gas industry, where operational risks abound, companies face constant pressures to ensure operational resilience, maintain compliance, and optimize performance. In this environment, internal audit and risk advisory play pivotal roles in safeguarding assets, enhancing processes, and fostering sustainable growth. This article delves into the significance of internal audit and risk advisory within the oil and gas sector, exploring their key functions, challenges, and emerging trends.

The Importance of Internal Audit and Risk Advisory:

Internal audit functions as the cornerstone of corporate governance, providing independent assurance to management and stakeholders regarding the effectiveness of internal controls, risk management, and governance processes. Within the oil and gas industry, where operations are inherently complex and capital-intensive, internal audit serves as a critical mechanism for identifying and mitigating risks across the value chain.

Similarly, risk advisory services complement internal audit by offering proactive insights and strategic guidance to anticipate and navigate emerging risks. Whether it's geopolitical instability, regulatory changes, or technological disruptions, risk advisory helps oil and gas companies stay ahead of the curve by implementing robust risk management frameworks and adaptive strategies.

Key Functions and Focus Areas:

- Risk Identification and Assessment: Internal audit and risk advisory teams collaborate to identify
 and assess risks inherent in exploration, production, refining, and distribution operations. This
 includes analyzing geopolitical risks, market fluctuations, environmental concerns, and technological
 challenges that could impact business continuity and profitability.
- Compliance and Regulatory Oversight: Ensuring compliance with a myriad of regulatory requirements, from safety standards to environmental regulations, is paramount in the oil and gas industry. Internal audit conducts regular audits to evaluate compliance with industry regulations and internal policies, while risk advisory provides insights into emerging regulatory trends and implications.
- Operational Efficiency and Process Optimization: Internal audit evaluates the efficiency and
 effectiveness of operational processes, from drilling operations to supply chain management, with
 the aim of optimizing resource utilization and minimizing costs. Risk advisory complements these
 efforts by leveraging data analytics and emerging technologies to identify opportunities for process
 automation and performance enhancement.

Cybersecurity and Data Privacy: With the increasing digitization of operations and the growing
threat of cyberattacks, safeguarding critical infrastructure and sensitive data is a top priority for oil
and gas companies. Internal audit conducts cybersecurity audits to assess vulnerabilities and
controls, while risk advisory provides strategic guidance on enhancing cybersecurity resilience and
implementing robust data privacy measures.

Challenges and Emerging Trends:

Despite the importance of internal audit and risk advisory, oil and gas companies face several challenges in optimizing these functions. These include talent shortages, budget constraints, evolving regulatory landscapes, and the need to keep pace with technological advancements. To address these challenges, companies are increasingly leveraging external partnerships, investing in talent development, and adopting innovative technologies such as artificial intelligence and machine learning for risk management and audit automation.

Moreover, as sustainability and ESG (Environmental, Social, and Governance) considerations gain prominence, internal audit and risk advisory are evolving to incorporate these factors into their risk assessment frameworks. This includes evaluating the impact of climate change, social license to operate, and community engagement initiatives on business operations and long-term viability.

In conclusion, internal audit and risk advisory play indispensable roles in enhancing operational resilience, ensuring compliance, and driving performance within the oil and gas industry. By identifying and mitigating risks, optimizing processes, and staying abreast of emerging trends, these functions enable companies to navigate the complexities of the industry and achieve sustainable growth in an increasingly uncertain world. As the industry continues to evolve, the partnership between internal audit, risk advisory, and management will remain essential for addressing emerging challenges and seizing new opportunities.

TECHNICAL ARTICLE

Edited by: Yash Kumar

"Decarbonisation and future energy systems in the oil and gas industry"

By: Dipaxi Dholariya (22BPE001)

The oil and gas industry plays a crucial role in global energy production, but it also contributes significantly to greenhouse gas emissions and climate change. Decarbonization is the process of significantly reducing or eliminating carbon dioxide (CO2) and other greenhouse gas (GHG) emissions from the atmosphere. Only 40% of the executives in our survey expect their organizations to meet their decarbonization targets this year, and just 46% will accelerate their decarbonization efforts in the year ahead. The shift toward decarbonization poses a substantial change for the oil and gas sector. Nonetheless, companies have the opportunity to become frontrunners in the future energy landscape by embracing emerging technologies, exploring low-carbon prospects, and adjusting to evolving market conditions. The effectiveness of this shift hinges on proactive investments, industry-wide collaboration, and the presence of supportive policy structures. Decarbonization efforts within the oil and gas industry are not only driven by environmental concerns but also by economic and social factors. Companies are increasingly recognizing the importance of sustainability and are investing in innovative technologies and strategies to transition towards a lower-carbon future while maintaining energy security and profitability. There are several methods in this industry which include Methane Leak Detection and Repair, Enhanced Oil recovery and subsea processing in Upstream. Electrification of pipelines, Carbon Capture and storage and hydrogen blending used in Midstream. Renewable Energy Integration and Biorefineries in Downstream.

These diverse decarbonization techniques offer promising solutions to tackle the industry's emissions challenge. The success of these efforts will ultimately depend on robust collaboration between industry players, governments, and other stakeholders, along with substantial investments in research, development, and technological innovation.he ability to collect, process and report carbon emissions data will be the most important enabler to success in a decarbonizing world. Oil and gas companies will have to operate differently than they do today, some of the biggest integrated oil companies have reduced upstream scope 1 and 2 greenhouse gases by around 20% since 2017.Renewable energy use is growing, but today, oil and gas represents over half of all energy consumption with whole industries dependent upon oil and gas. Oil and gas have a significant role to play both in energy delivery today and in enabling the energy transition for tomorrow. The oil and gas industry has a defining role to play in shaping the future energy system. By embracing decarbonization and actively transitioning to cleaner operations and technologies, the industry can ensure its long-term viability and contribute to a more sustainable future for all.

