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PETROKASS MAGAZINE

4 Technologies to Improve Workplace Safety

Virtually any company can benefit from investments in workplace safety technology. Businesses with physically intense operations

Digitalization, AI and renewable energy top themes for global investors

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PETROKASS
Consultaion & Training

"PETROKASS Magazine is a Monthly Magazine Owned by PETROKASS Company Specialized in Petroleum Sector and Generalized in Management and New Technology This Magazine Created by you Containing Chaptered Topics and Information's with New Style and Published all over the World."

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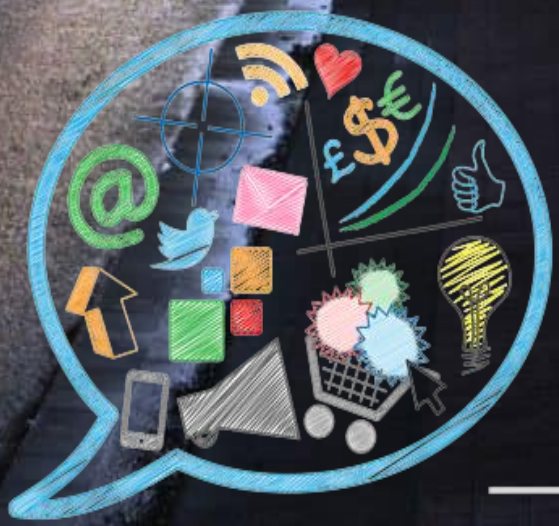
- QHSE
- Technology
- Digitalization
- Drilling Operations



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ADVERTISING

There is no doubt that the world of oil, gas and petroleum industries has become one of the most important areas that the whole world is preoccupied with and that there are great efforts for continuous development, along with serious research efforts for young researchers.

Therefore, we are pleased to present the first issue of **PETROKASS** magazine, which contains among its pages a number of articles, news and editorial presentations in various fields related to the world of the petroleum industry.

This Magazine included honest words to suit the generation of elders of science and its senior professors, the middle generation that seeks promotion and prepares for it, and the young generation of its employees, who the magazine's management was keen to Express their thoughts and allocate a corner for the hardworking and serious among them, in order to achieve the main goal of its issuance.

Editorial Board

PETROKASS in words:

PETROKASS is a Specialized and Authorized Education and Consultancy Company established since 2010, providing a wide range of Training & Consultancy services within MENA and overseas in Different Field Industries and Specialized in Oil & Gas and Located in United Arab Emirates.

Our vision:

Business Market needs Special services in-which Serve the Potential and requirements Also Looking for an answer for the most Important Question, which how can we develop our Needs, PETROKASS Has the Answer for this its Unique Options and After Market Services.

Our Mission:

To provide the Business market with Appropriate professional needs with Assuming the best works to companies *in the field.*

QC VS QA

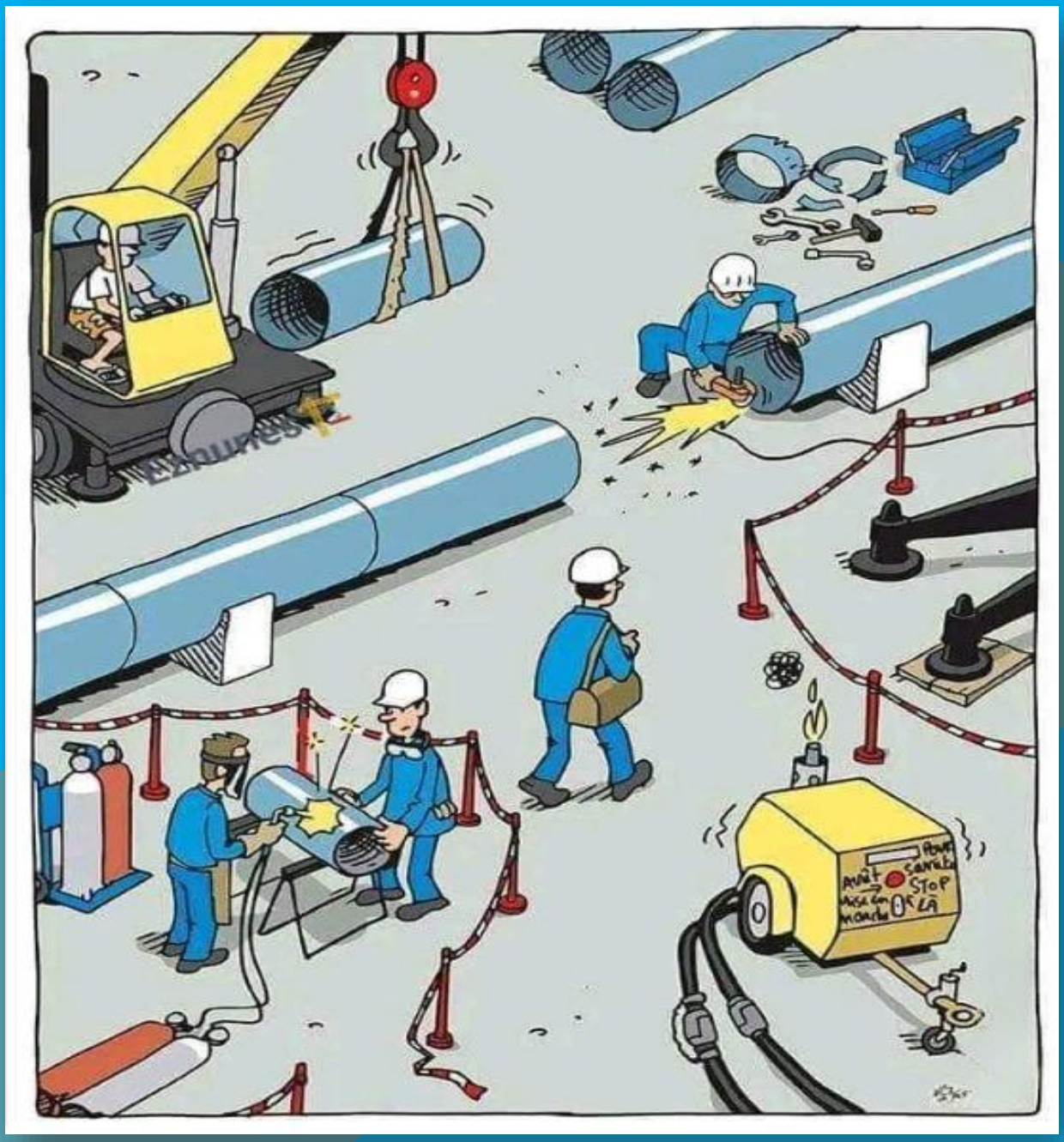
QHSE

Here is the exact difference between Quality Control and Quality Assurance that one needs to know:

Quality Assurance	Quality Control
It is a process which deliberates on providing assurance that quality request will be achieved.	QC is a process which deliberates on fulfilling the quality request.
A QA aim is to prevent the defect.	A QC aim is to identify and improve the defects.
QA is the technique of managing quality.	QC is a method to verify quality.
QA does not involve executing the program.	QC always involves executing the program.
All team members are responsible for QA.	Testing team is responsible for QC.
QA Example: Verification	QC Example: Validation.
QA means Planning for doing a process.	QC Means Action for executing the planned process.
Statistical Technique used on QA is known as Statistical Process Control (SPC.)	Statistical Technique used on QC is known as Statistical Quality Control (SPC.)
QA makes sure you are doing the right things.	QC makes sure the results of what you've done are what you expected.
QA Defines standards and methodologies to followed in order to meet the customer requirements.	QC ensures that the standards are followed while working on the product.
QA is the process to create the deliverables.	QC is the process to verify that deliverables.
QA is responsible for full software development life cycle.	QC is responsible for software testing life cycle.

QHSE

Hazard Identification



Identify the Hazards in the Picture and send the Answer on

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Technology

4 Technologies to Improve Workplace Safety

4 Technologies to Improve Workplace Safety Rapid innovation in technology is impacting every corner of business operations—and workplace safety is no exception. Advances in nanotechnology robotics, data analytics, video and telecommunications are enabling employers to improve workplace safety in a variety of ways such as better monitoring employees' health, reducing physical stress and keeping personnel out of harm's way. In addition to protecting workers' safety technology can help boost employee morale reduce turnover and control business insurance costs.

Virtually any company can benefit from investments in workplace safety technology.
Businesses with physically intense operations—such as construction transportation and warehousing, and farming—may see the greatest benefits from the following four types of safety tech.

Technology

- Wearables

Wearable technologies are now available that can help lower the frequency and severity of injury to workers. Wearable technology falls into four categories:

Physiological Monitoring – Devices that track body temperature, heart rate, respiration, and other physiological measurements can help determine when a worker is fatigued or stressed and therefore at greater risk of injury.

Environmental Monitoring – These wearables can alert your employees of unsafe air quality or temperature conditions that could cause injuries.

Proximity Detection – This type of wearable, which can be embedded in personal protective equipment (PPE) like hardhats, can help prevent employees from entering hazardous areas or getting too close to equipment.

Exoskeletons and Exposits – By providing assistive force for physical tasks, such as heavy lifting or standing for long periods, these wearables can help prevent injuries and enable injured employees to return to work more quickly.

- Drones and robots

Manufacturing robots that perform repetitive and lifting tasks have long enabled businesses to reduce workplace injuries. Now your business may be able to further improve workplace safety by assigning higher-risk tasks to sophisticated, highly mobile drones and robots.

Drones—or Unmanned Aircraft Systems (UAS)—can be used by businesses such as construction companies and manufacturers to minimize employees' exposure to falls and other risks by inspecting sites and monitoring operations. Similarly, robots can access hazardous difficult-to-reach locations—such as tunnels and storage tanks—to perform inspections and collect samples.

- Safety apps

Smartphone apps are one of the easiest ways to leverage technology to assess, monitor and improve workplace safety. Available apps—many of which are free— enable workers and supervisors to evaluate tasks and working conditions by for example, measuring noise hazards promoting ladder safety and safe lifting, and providing guidance on handling hazardous materials. Some sector-specific apps also support workplace safety by helping businesses remain compliant with occupational safety regulations.

- Virtual Reality and AR

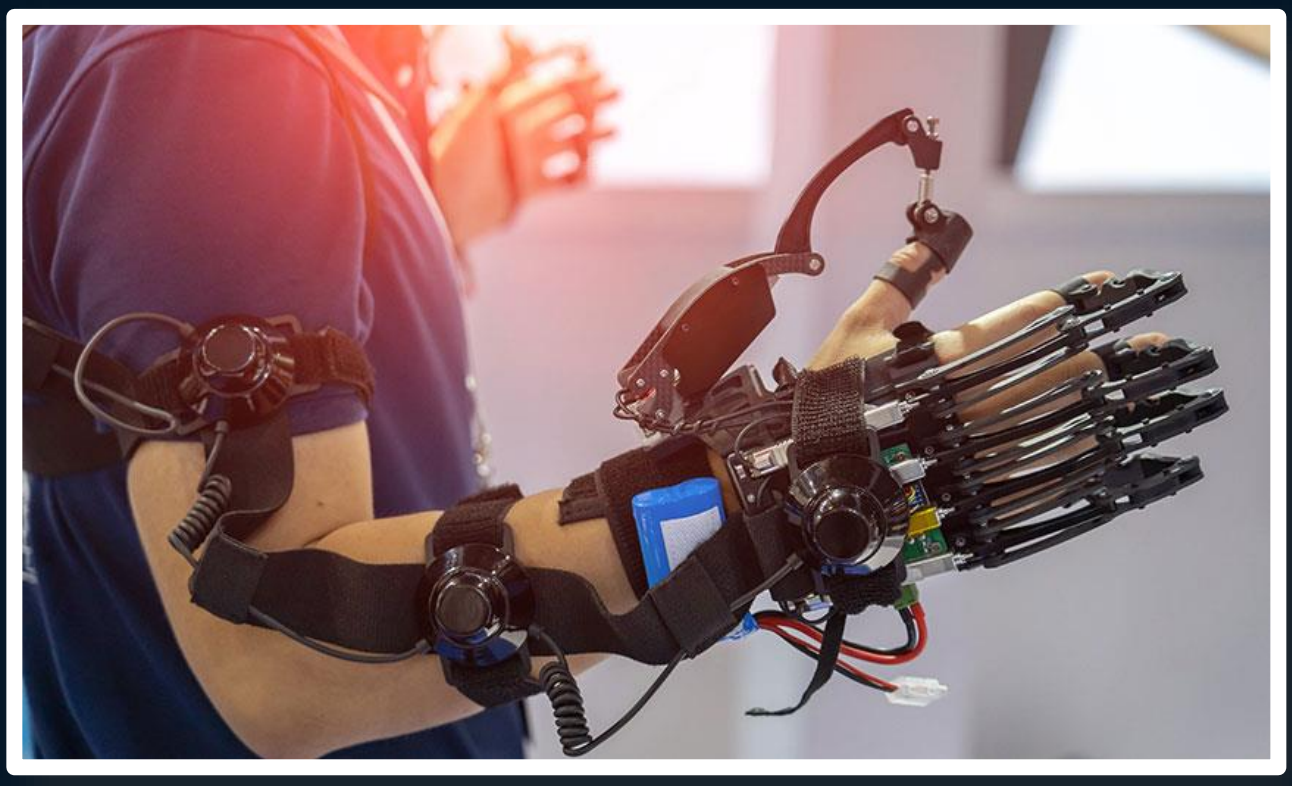
Today, many tech vendors are already offering Virtual reality (VR) safety training programs that can enable your employees to practice using equipment and simulate working environments that pose potential risks. VR can also be used for training drills, such as fire evacuations. Looking into the future virtual reality and augmented reality (AR) technologies may be increasingly used to simulate tasks to measure and reduce risks—before a worker starts the actual job.

The High Costs of Workplace Accidents

Technologies to Improve Workplace. When evaluating your occupational safety and workers' compensation insurance options, consider more than premium costs and claims handling. A workplace injury can hurt morale and productivity, as well as generate costs associated with turnover and absenteeism. Ask your insurer about services that will help you improve workplace safety and reduce accidents in the first place.

Your insurer may be able to help you identify technologies best suited to improve worker safety at your business.

Finally, Technologies is very important to Improve Workplace.



Digitalization, AI and renewable energy top themes for global investors

Energy security, an ageing population, electric vehicles and battery storage round off the top trends.

Digitalization, artificial intelligence and renewable energy are the top investment trends for global institutional investors, pension funds and family offices who consider these sectors as key to shaping the world economy over the next three decades, invest corp. has said.

Energy security, an ageing population, electric vehicles and battery storage are also among the top investment mega-trends, according

to Bahrain-based alternative asset manager's third annual What's Next? Investment Trends for the Future report.

About 92 per cent of global investors ranked digitalization and AI as the leading investment themes, followed by 77.8 per cent who cited renewable energy and energy security, 70 per cent who mentioned ageing populations and 68.9 per cent who highlighted electric vehicles and battery storage, the survey showed.

Invest corp. conducted the global survey in partnership with IMD Business School to gauge the sentiment of institutional investors and explore the economic trends driving investment allocations.

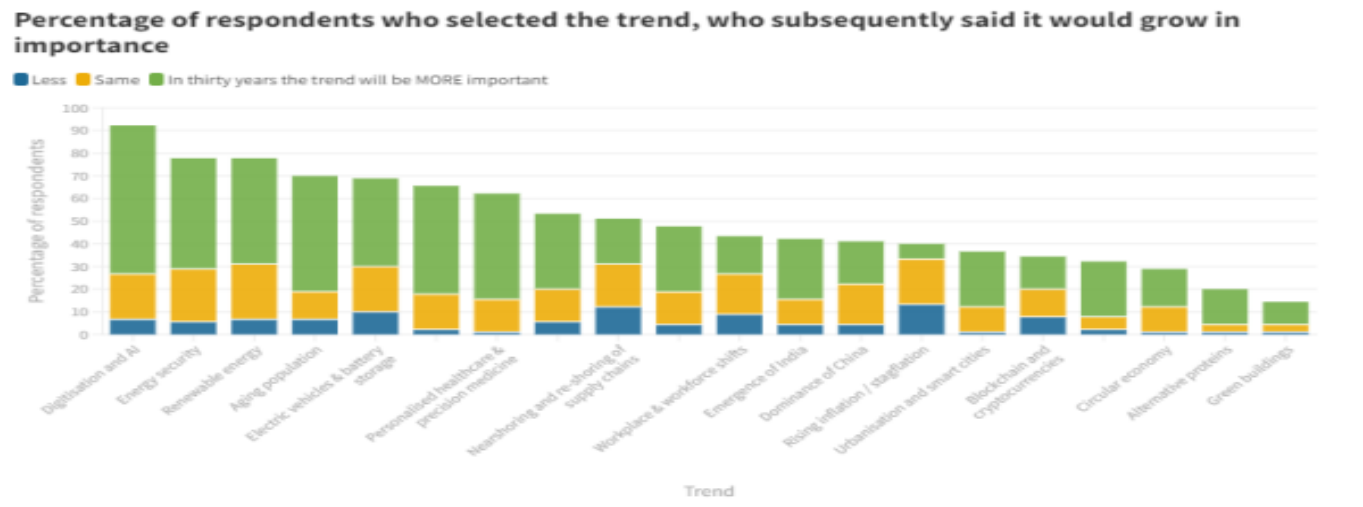
The survey maps the wider demographic, resource, technological, environmental and geopolitical factors that are driving the global economy and what that means for current and future investment opportunities.

“It is clear that for global investors, digitization and AI is a key trend that will shape the global economic landscape over the long term and our data suggests that companies that leverage leading-edge technologies for solving universal or critical problems are going to be as highly investible in the decades to come, as they have been in recent years,” co-chief executive Rishi Kapoor said.

“Even though the sector has had a very difficult year, it remains an attractive investment domain today, and investors surveyed believe it will ride out the current macroeconomic storm.

“This provides some hope and opportunity for growth capital and investors that predominantly invest in the technology space.”

Investments in digital transformation across the Middle East, Turkey and Africa region are projected to surpass $74 billion by 2026, helping organizations to achieve long-term stability and growth, a study by the International Data Corporation said.



Spending on such initiatives is expected to grow at a compound annual rate of about 16 per cent over a five-year period through 2026, and would account for more than 43 per cent of total information and communications technology investments, the US research company said last month.

ARTIFICIAL INTELLIGENCE

In terms of renewables and decarburization, invest corp. has “strong conviction in this space as we see a market with increased demand and supply issues, potential for huge innovation and a favorable regulatory backdrop”, said co-chief executive Hazem Ben-Gacem.

Capital investments in renewables are set to outstrip oil and gas projects for the first time in 2022 as high power prices prompt countries to further diversify their energy mix, Rusted Energy said in a report in October.

The level of capital investment in the sector has increased “significantly” and is set to reach $494 billion in 2022, outstripping upstream oil and gas at $446 billion for the year, the Norway-based consultancy said.

Energy security was a key theme for investors surveyed in both Europe and the US, given the continuing Russia-Ukraine war that drove up the prices of oil, gas and other commodities in 2022, said Invest corp.

“It has now become an imperative for western markets to invest in domestic energy production to strengthen and ensure its own energy security,” the report said.

“Survey data suggests that investors anticipate the energy security theme to continue well beyond the current conflict and believe it will lead to opportunities to invest in domestic energy production in Europe and beyond.”

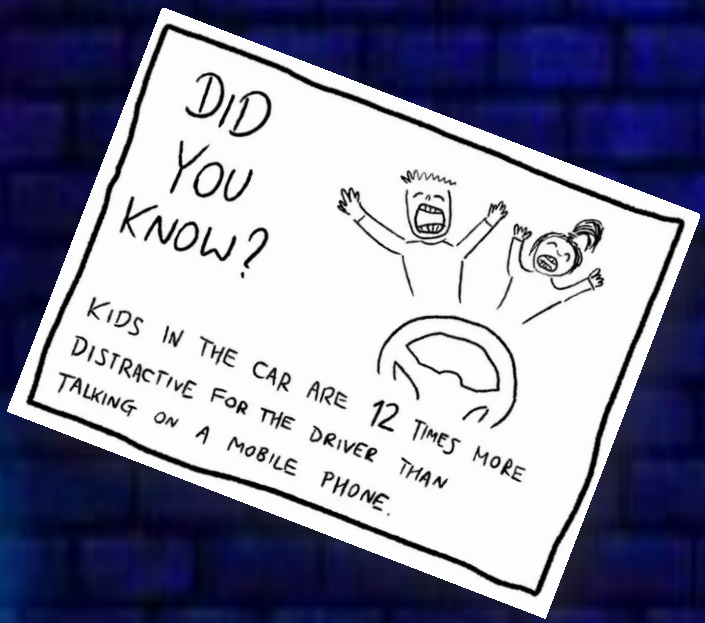
Global investors are more divided across regions on the other megatrends shaping the world economy.

For example, a number of European and Asian investors — most probably driven by Japanese and Chinese investors — are concerned with the trend of an ageing population, while this is less of a concern for the US and Middle Eastern regions due to their younger population, the report said.

FUN FACT


DID YOU KNOW?
ZEBRAS ARE ACTUALLY BLACK WITH WHITE STRIPES, NOT WHITE WITH BLACK STRIPES.


THE WORLD IS A CAT
PLAYING WITH AUSTRALIA.


DID YOU KNOW?
KIDS IN THE CAR ARE 12 TIMES MORE DISTRACTIVE FOR THE DRIVER THAN TALKING ON A MOBILE PHONE.


DID YOU KNOW?
CHEESE IS THE MOST STOLEN FOOD IN THE WORLD.
4% OF ALL CHEESE ENDS UP BEING STOLEN.

Drilling Fluid Engineering

Continued from February Issue

In a complete mud cleaning system, the following cleaning methods may be included:

1. Settling
2. Dilution
3. Mechanical separation
4. Chemical treatment

Each method exhibits certain advantages and disadvantages. The most efficient form of solids control is a combination of several methods. Settling can remove particles down to colloidal size, but settling is time consuming and impractical. Mechanical separation can remove particles of sizes down to 5 mm

Shale shaker	Can remove solids > 68 μ (200 mesh)
Desander	Dependent on size of the cone, can remove solids > 30 μ
Desilter	Dependent on size of the cone, can remove solids> 15 μ

Shakers are the most common cleaning method. With the quality and fineness of shaker filter screens available today, other cleaning methods have become almost obsolete. With a 60 mesh and a 300 mesh filter screen in series, 99 % of the cuttings are removed. A 60 mesh filter screen removes the largest cuttings and protects the extremely fine second filter screen from wear and tear.

Mesh	Wire Diameter	Opening Width	Smallest particle size removed
	Inches	Microns	Microns
10	.0250	2108	2000
20	.0160	863	800
60	.0072	230	205
100	.0045	140	125
120	.0037	117	105
200	.0030	74	68
325	.0018	44	40

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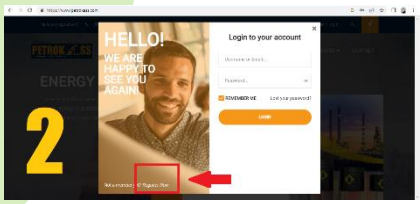

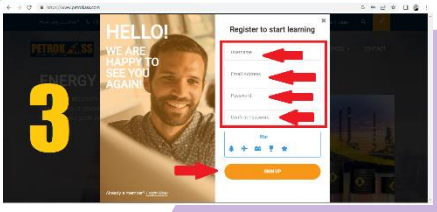

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4. Click Sign-up
5. You are done

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