



Sui Northern Gas Pipelines Limited

sng

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Syed Jawad Naseem

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Department

SNGPL's Commitment to Quality Standards

Mr. M. Arif Hameed, Managing Director, SNGPL met Mr. Steve Ditcham, Director Sales & Mr. William M. Inglis, Vice President – Asia / Pacific of M/s. Sensus UK Systems Limited along with Mr. Muhammad Kalim, Managing Director, Gas Engineering & Technology (Pvt) Limited, Karachi, to deliberate on the quality of meters and advancement in the field of gas measurement.

More inside:

Shale Gas

| Solar

| Protecting Workers

| Hashim Khan Tribute



Mr. M. Arif Hameed (MD, SNGPL) discussing quality of meters with Mr. William Inglis, Vice President AP UK Gas, Sensus EMEA Asia Pacific and Mr. Steve Ditchan, Director Sales, Asia

The Managing Director SNGPL emphasized on the need to focus on the quality of meters especially in the domestic sector to improve accuracy of measuring gadgets for longer durations. He was adamant upon developing

the current standard and quality of the meters installed and availability for gas measurement purposes. Gas measurement is the next important process after the provision of gas, especially in the domestic sector. It

accounts for the accuracy of the device so that the billing and accounts based on a particular meter are accurate.

EDITOR'S NOTE

Under the guidelines given by the Honourable Managing Director and the Company's dedication towards employees' safety and health, the HSE department has launched services to suffice the safety needs of the staff. Portable fire extinguishers and safety tools used in the prevention of abrasive blasting have been introduced by the HSE department. The services rendered by HSE department in this regard are commendable.

Efforts are being made in improving the gas measurement equipments and their functioning. Mr. M. Arif Hameed discussed the quality of meters for gas measurement and sufficient provision of the same in the domestic sector with national and international experts in the field of gas measurement.

Syed Jawad Naseem
General Manager
(Regulatory Affairs / Media)



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SOLAR POWERED CP SYSTEM

Uninterrupted power supply to CP system is the need of the hour, keeping in view the heavy power breakdowns in the cities and villages.

Solar Powered CP System enables us to produce Direct Current electricity from the sun light which can be used to charge/ re-charge a battery bank for further energizing the CP system; totally independent of Wapda supply.

The Corrosion Control Department achieved another mile stone and was able to successfully install 04 nos. Solar Powered CP Systems in Section -I. Now, there are a total of 05 Nos. Solar Systems operational in section-I providing un-interrupted power supply to the following Transmission segments in Multan (T) :-

- SMS Bahawalpur (Solar) 08" Dia BWP (Trans.) Line
08" Lodhran Supply Main
08" Bahawalpur Line (Distt.)
- MP-175.50 (Solar) 36" Dia Line
30" Dia Main Line
24" Dia Main Line
18" Dia Loop Line
- MP-239.50 (Solar) 36" Dia Main Line
30" Dia Main Line
18" Dia Main Line
- Sokker Road (MP-13)
(Solar) 16" Dia Dhodak/K.Addu

The department is on the way to further install 20 nos. Solar powered un-interrupted systems in other Transmission sections and in Distribution regions. The total capital cost of the project borne by the Company is Rs. 9.4 Million which cannot be compared to the system's major benefit that is "minimizing the potential threat to Transmission line due to interrupted Cathodic Protection". This will surely prove to be highly beneficial for the Company and its growth.

S.Wajahat Hussain
Engr (CORR.) C.C.C.



Fiery Ice- Fuel of the future

In the search of new sources of energy, Japan is digging deep. Just off its south-west coast, 1300 meters below the surface, a huge cache of slushy, combustible ice lies buried in the ocean floor. Japan is now carrying out the first offshore attempt to produce methane gas from the frozen methane hydrates. If successful, this could be the next energy source.

Methane hydrates consist of methane molecules trapped in a cage like structure of water called a clathrate. Cold temperatures and high pressure keep them solid, and their compressed structure gives them 164 times the energy potential of an equivalent volume of natural gas. Methane hydrate is also called methane clathrate, hydro-methane, methane-ice, fire-ice, or natural gas hydrate.

The nominal methane clathrate composition is $(CH_4)_4(H_2O)_{23}$, or one mole of methane for every 5.75 moles of water. One litre of fully saturated methane clathrate solid would therefore contain about 120 grams of methane. There are two distinct type of oceanic deposits. The most common is dominated (>99% methane) by methane contained in a structure I clathrate generally found at depth in the sediment and formed in situ from the microbially produced methane. The less common second type has a higher proportion of longer chain hydrocarbons (<99% methane)

contained in a structure II clathrate, found near the sediment surface are formed by thermal decomposition of organic matter.

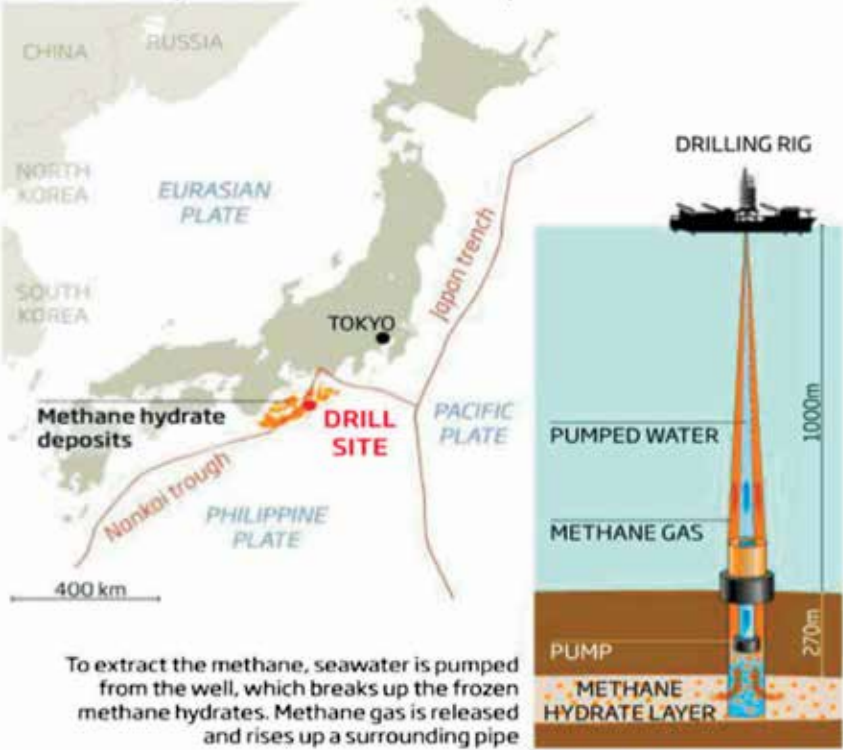
They are abundant in ocean floor around the world and under Arctic permafrost. Some estimate that the planet holds three orders of magnitude more gas in hydrates than in traditional gas seams, and that their total energy sources are combined. The US, India, South Korea and Russia all have programmes to explore the potential of hydrates, but the on-going natural gas boom makes it a low priority for now. Also, in the majority of sites deposits are thought to be too dispersed for economic extraction. Other problems facing commercial exploitation are development of technology for extracting methane gas from the hydrate deposits.

Japan is an exception. It has invested hundreds of millions of dollars in hydrate research, especially in the Nankai, though off its Pacific coast. The area may hold enough gas to meet the country's energy needs for a century. Japan is the world's largest importer of natural gas, and the hydrate project was



Drilling for frozen gas

Hidden under the seabed off the coast of Japan, frozen methane stores hold enough energy to power the nation for 100 years. This month sees the first test of full-scale production on these methane deposits

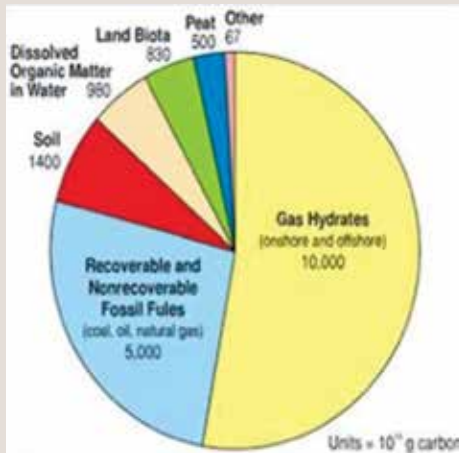


expedited after the Fukushima nuclear plant disaster in 2011.

Japan Oil, Gas and Metals National Corporation will drill 300 meters below the seabed, place a pipe to carry methane to the surface.

The goal is to produce tens of thousands of cubic meters of gas over about two weeks. Commercial production could start in 2018. Japan estimates that there are at least 1.1 trillion cubic meters of methane trapped in the Nankai trough.

First, the team must solve a number of environmental and technical challenges. Chief among these is how to turn the solid hydrates into gas. The plan is to pump out seawater from inside the gas pipe. This will lower the pressure in the pipe and break up the hydrates into water and methane gas, which will rise up the outer pipe. If that doesn't work, other solutions include pouring it in an antifreeze.



Even the project's environmental impact statement admit that they know little about the problems large-scale extraction could cause. Landslides are the biggest known risk. Hydrates are often key structures in the sea floor. Before oil and gas companies became interested in exploiting them, hydrates were considered a risk because they collapse beneath heavy oil rigs. Deliberately drilling through them or mining them could disturb the seabed stability.

The current test at Nankai is unlikely to pose such a risk but large scale hydrate

mining could. In shallower waters or on steeper slopes, anything you do, could cause a landslide.

The Japanese team will monitor sea floor movement during their test. They hope this will help them calculate how much gas can safely be extracted over a larger area, and how fast.

It is also a matter of immense concern that large-scale mining could cause greater unforeseen impacts like small earthquakes or an uncontrollable gas release that would escape into the atmosphere or acidify the water around the bare hole, because we are basically punching a hole into a zone we do not know about.

In some respects, deep sea hydrates may be less risky than conventional gas seams. Uncontrolled leaks are a risk for any gas rig and for the climate, as methane is a powerful greenhouse gas. Despite its short atmospheric half-life of 7 years, methane has a global warming potential of 62 over 20 years and 21 over 100 years (IPCC). But deep sea hydrates have a built-in fail-safe: if the pipeline breaks, the water pressure would make the hydrates recrystallize, helping to stem the leak. Any gas that did escape would dissolve in the water column or will be eaten by bacteria.

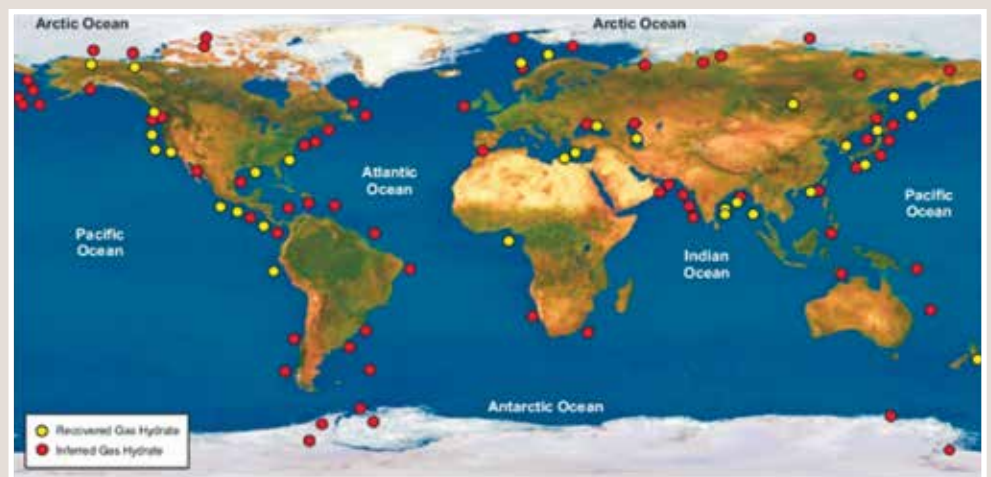
Hydrate miners should tread more carefully in shallow waters or the Arctic permafrost, where hydrate mining projects have been proposed, because

every gram of methane in the air is a disaster. So it may come as a surprise that hydrates could one day become a carbon-neutral energy source. Carbon dioxide can also form clathrates. Researchers are looking for ways to pull the gas out of the atmosphere and substitute it for methane hydrates. For complex chemical reasons, the crystals prefer the CO₂, taking it in and expelling natural gas. That would have the added advantage of leaving the sea-floor structure unchanged.

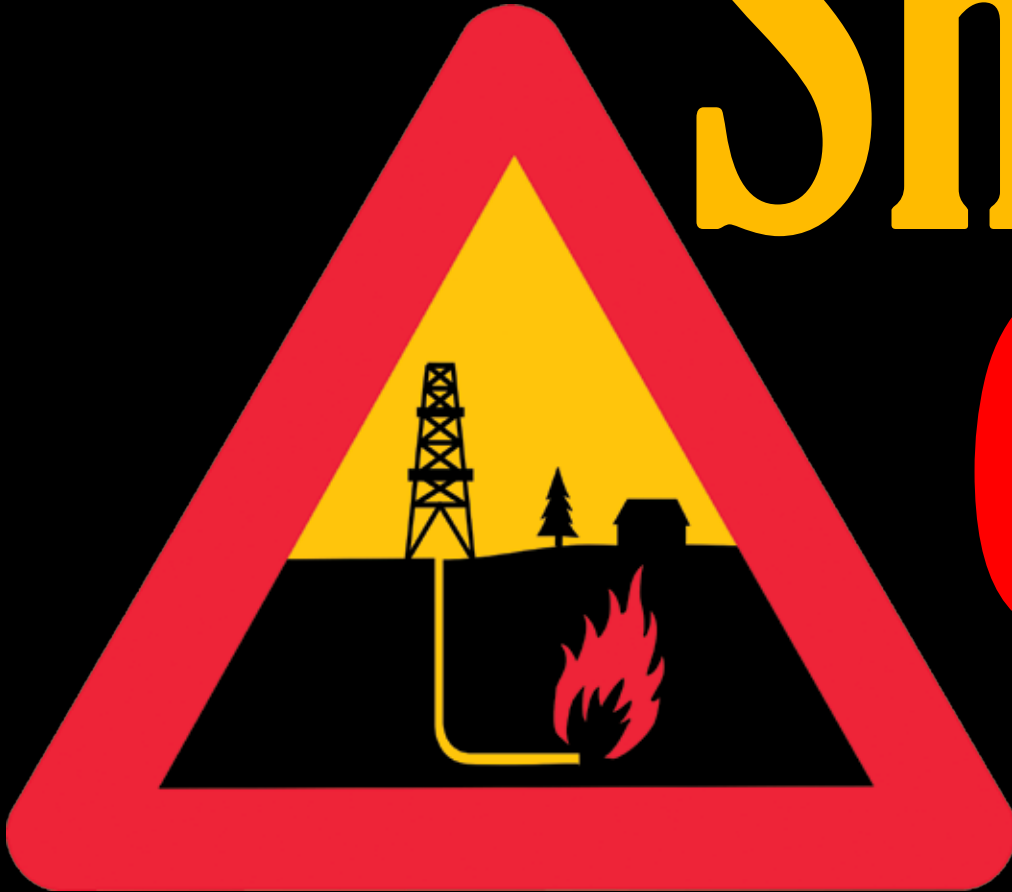
The technology for this is still embryonic. In April 2012, a US team performed the first large scale test by pouring liquefied CO₂ down a bare hole at Conoco-Phillips oil field on Alaska's North slope. The clathrates traded some of their methane for CO₂, and released the gas back up the pipe. If undersea methane hydrate could be mined in this fashion, the sequestered CO₂, forever imprisoned in ice beneath the waves, would offset some emissions.

This new kind of carbon sequestration could ameliorate some of the long term environmental damage that widespread global use of cheap natural gas from methane hydrate will do. But even if such techniques work in the way researchers hope, the infrastructure transformation ahead is daunting in scale and scope. It is like setting up a second industrial revolution, all over the world and in one third time.

Javed Ashraf
Executive Engineer (Compression)



Shale GAS



The term 'Shale' is used to determine the sedimentary rock formation which are in small sized rock particles and are rich in clay minerals. It is the best possible cheap gas available. Natural Gas is stored in shale as a free gas which involves less emission than existing coal or oil resources.

In Pakistan, the estimated amount of Shale Gas is 105 TCF which is in very high quantity as per the Energy Information Administration (EIA) based surveys which were conducted by Advanced Resources International

(ARI). The exploration of shale gas shall fulfill the need of energy sector as well as it would boost the economy out of the current fix and create numerous job opportunities in Pakistan.

Exploration of Shale Gas

The best possible way to extract shale gas is from horizontal drilling and Hydraulic fracturing. It is the cheapest way to dig up them in a large quantity.

Shale "Play"

Shale gas is produced in shale "plays," which are shale formations that hold considerable quantity of natural gas that has same geologic and geographic nature.

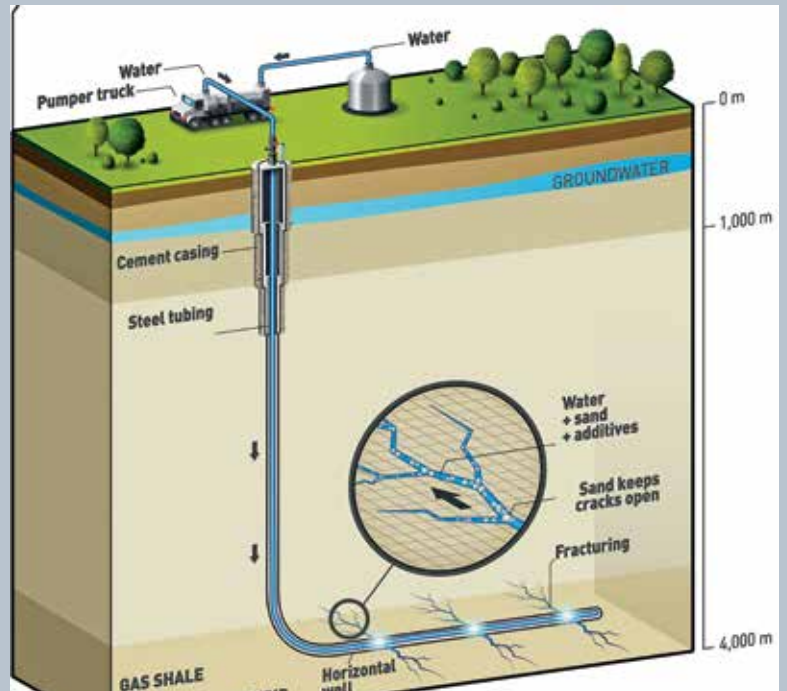
Hydraulic Drilling

In Hydraulic fracturing (fracking), a fracking fluid is impelled with tremendous force into the well that improves the limited pressure. This enables the rock to fracture, allowing the gas or oil to flow.

Comparison between Conventional Gas and Shale Gas

Conventional gas is basically a fossil fuel which is found in large porous sandstone reservoirs and there is no complication involved in its drilling process. It is very easy to take it out from the well through various methodologies.

Shale Gas, on the other hand, is formed in organic rich shale rocks. These rocks are less porous which really restrain the gas to travel to more porous reservoir rocks. Shale Gas is not cheap without the Horizontal drilling and Hydraulic fracturing.

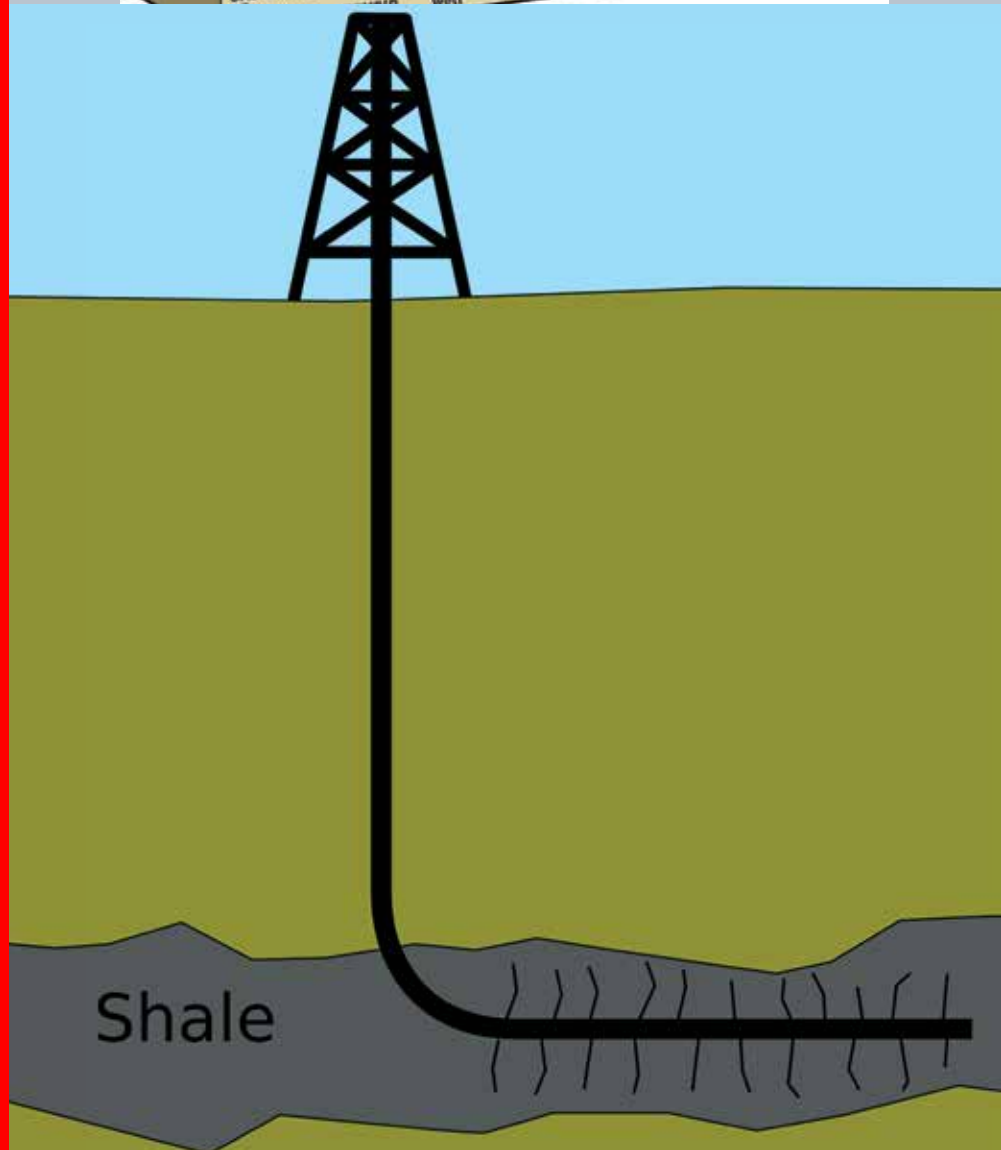


Environmental Hazards

There are some serious concerns which show that the drilling process of Shale Gas has some environmental hazards. In the Horizontal drilling and Hydraulic Fracturing, water is used immensely and the enormous pressure of drilling process of well produces a large amount of rock cuttings, drilling mud, dissolved chemicals and other pollutants; should be disposed off before it affects the aquatic animals, plants and human life.

Proper rules and regulations should be made in order to initiate a large-scale shale drilling operation, so that the required arrangements can be made for the disposal of the remaining material, to safeguard both aquatic and human life.

Umar Saadat,
Coordinator PR,
Media Affairs Department



Knock Knock!!!

Mr. Consumer: "Give me your gas bill. I am a leak detection Inspector."

"I travel several miles in a day. I am a hunter of leaks. I catch the leaks and paint it with red paint color. I am always in search of a leak that contributes towards gas losses. Laser machines are my hunting tools. With them, I sense the breathing of hidden underground leakages. I have to be strong for this, for I have to make holes in the ground in every street at every 15 feet of earth's chest.

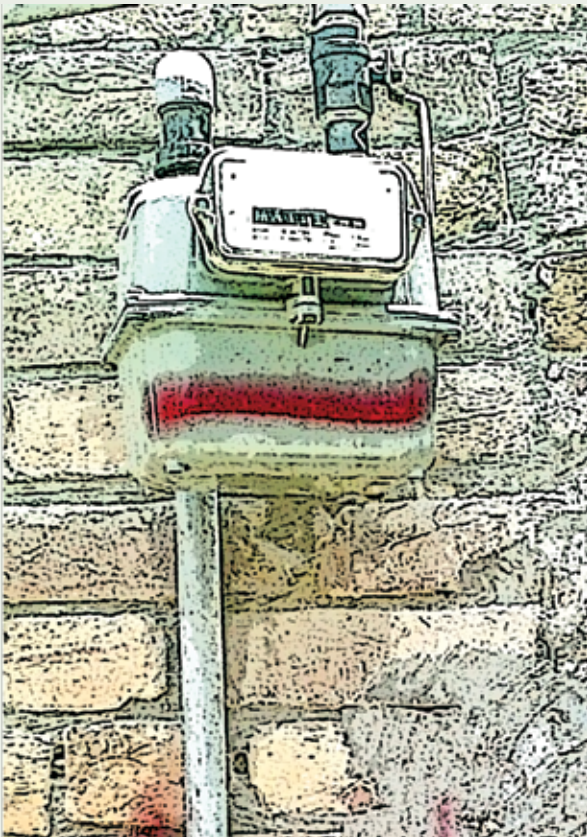
My task includes walking in the streets, making holes, detecting leaks and setting up ways of repairing them immediately.

Moreover, I am myself a Mobile Customer Service Centre. I identify various anomalies in distribution gas network seen during my core job and report it for the betterment of my Company's distribution network.

Indeed, I am a silent contributor in UFG reduction plan of the Company."



"I AM A LEAK DETECTION INSPECTOR "



S. Wajahat Hussain
Engineer (Corrosion)-Gr-3
Corrosion Control Centre



Strategic Human Resource Management:

Road to Competency Remodeling

Competency remodeling is not a one-time phenomenon. It rather is entrenched into an organization's key processes on long term basis. The object of the exercise is to enrich learning and development of the individuals in order to ensure that a fully competent workforce is available at all times. It all starts off with staff assessment which in its own right is an uphill task. Most of the organizations have often been observed getting nothing out of it even after spending too much of time, energy and resources on it. Their raw material is their end product at the end of the day.

An unnecessarily broad range of competencies makes assessment process lengthy. The skills gaps thus identified, lead to an irrelevant learning plan. It therefore is important to go for competency models with a small list of competencies focused on the key skills for the job. A skills gap should not be included unless there is a strong

possibility that it would result into training.

In some organizations, competency models are written for all staff, who are then assessed, often doing self-assessments followed by supervisor assessments, then verifications. It takes quite a lot of time after the employee's self-assessment that he receives any feedback. On the alternative, the assessment process may be batched so that each week 50 staff members are put through the full assessment process—assessed, verified, skill gaps identified, and training goals agreed. This batching of assessment process is more likely to produce tangible results.

Where there is a contentious relationship between the employee and supervisor; the employee may be asked a few questions at the level at which he would assess himself for a competency, to confirm that he truly was at that level. Such an approach would help the organization

remove the potential for conflict. It is important, however, to use the approach with caution as it can affect the overall reputation of competency management: moving it from competency management to assurance.

There are organizations which operate in naturally sensitive areas and are subject to extra legislative requirements including random audits of their regulatory compliance. In order to be able to demonstrate their achievement of compliance requirements, they set up their systems to import their data into their competency system so that they could produce regulatory reports on the levels of competency and compliance of all staff on shift at any time. In building their competency data into the heart of their business applications they could provide real business benefits in ensuring full regulatory compliance.

used
young
fighting
common
urine
managing
form
warning
behind three

s
steps
knows
Thus

Diabetes

never



- Having adequate sleep can help your body maintain your appetite and also decrease the risk of any disease. More or less sleep can disturb your metabolism and increase the risk of sugar levels and blood pressure.
- A diabetic must regularly monitor the sugar levels. Your doctor may advise you to retain a specific blood sugar level and by doing that you will be able to avoid further complications like nerve pain and high diabetes scenarios.
- Diabetes increases the risk of swelling, slow healing of wounds and formation of sores and bruises. In case of any slight injury, a diabetic must monitor the feet most importantly because healing in the feet is the slowest for a diabetic. Clean any

wound, bruise or the smallest of the cuts with antiseptic lotion and keep it open after regular cleaning. In the worst of cases, slight ignorance may lead to large sores and infections.

- Visit your doctor regularly and keep track of your past blood sugar levels. A strict eye will help you maintain the blood sugar level in the future. The medication advised by the doctor, must be taken regularly and slight ignorance on your part, may disturb your sugar levels.

Life for a diabetic is on the watch and must be led with intensive care and vigilance.



Mifrah Mehmood,
Media Coordinator,
Media Affairs Department



LISTENING

A Forgotten Art

Listening is an active process of receiving and responding to spoken (and sometimes unspoken) messages. Epictetus, an ancient Greek philosopher had said:

“Nature gave us one tongue and two ears so we could hear twice as much as we speak.”

‘Listening’ is to what others have to say. Being heard and understood is a basic human need and we all need to feel that. Listening is an art which delivers tremendous benefits. It is a powerful thing which makes the person talking to you, more creative. As a good listener, people will be attracted towards you because you have the ability to make people feel good about themselves.

People who do not listen eventually become very lonely because they do all the talking and are not interested in listening to what others have to say. People move away from such individuals and move towards those who listen.





Listening is a skill and requires practice and patience. Let the speaker talk freely and once they have had their fill, you can explain your ideas. Silence is a great tool if used in the right way when listening to others.

Try listening to your parents, your spouse, your children, your colleagues, friends and to those who love you and even those who don't. Listen and you will be amazed at what is unfolded before you. A good listener easily establishes a magnetic bond with others. Activate listening skills by asking purposeful questions that cannot be answered with a simple "yes" or "no". To be an effective communicator, be physically and mentally present in the moment. Use ears to hear the message, the eyes to read the body language and the sense to understand what the speaker is actually trying to say. It's been said that 93% of our communication is non-verbal – 38% being vocal (i.e. tone), 55% physical (gestures, facial expressions, posture, eye contact), and only 7% being words to make 100% (Dr. Albert Mehrabian's book, *Silent Messages*).

It is imperative to listen with open mind. Sometimes, our experiences and prejudices can be an obstacle in effective listening. Self exploration (asking yourself what it feels like when somebody really listens to you) is a good way to improve listening skills. Hear everything that is being said and then respond. Try not to interrupt the speaker with your own thoughts and opinion. Show kindness when you are listening. It will illustrate that you have the ability to understand and accept others with all their feelings, thoughts and opinions. Besides understanding and appreciation, listening creates an atmosphere of trust, honor and respect.

Unfortunately, listening is slowly becoming a forgotten art. "We are so busy making sure that people hear what we have to say that we have forgotten to listen". Listening is a strong weapon. You should listen 70% of the time and talk 30% of the time. Listening is a skill of critical significance in all aspects of our lives--from maintaining our personal relationships to getting our jobs done. We hear mostly what we want to hear, not what the other person is trying to communicate to us.

Listening Tips

Here are some suggestions for developing your listening skills:

- **Develop the desire to listen**
- **Always let the other person do most of the talking**
- **Don't interrupt**
- **Learn active listening**
- **Ask for clarification if needed**
- **Get used to 'listening' for nonverbal messages – body language, and understanding the unsaid**
- **Ask purposeful questions.**

INTERACTIONS



Mr. M. Arif Hameed (MD, SNGPL) in conversation with Mr. Umar Masood Faruki, CEO Renior Group & Advisor to PM's Manifesto Committee and Mr. Stefan Petry (Global Sector Head Oil & Gas)



Mr. M. Arif Hameed (MD, SNGPL) in a meeting with Mr. Wan Norazi bin Ab Aziz, CEO TNB Liberty Power



Mr. M. Arif Hameed (MD, SNGPL) giving “10 Years LONG SERVICE AWARD” to Mr. Misbah UI Haque Khan (Senior Officer Sports)

ACHIEVEMENTS



Miss Memoona Khalid daughter of Mr. Muhammad Khalid Mahmood, Senior Accountant (Gas Sales) obtained 1028/ 1100 marks in Board of Intermediate and Secondary Education, Lahore.



Miss Tooba Mehmood, daughter of Ms. Hajra Qamar Sr. Sup DEO (IT/ MIS) obtained 1000/ 1050 marks in Federal Board.

Asian Junior Individual Squash Championship 2014



Mr. Muhammad Asim Khan secured 3rd position in the Asian Junior Individual Squash Championship 2014, in the Under 19 category, held at Kish, Iran.

THE FACT FACTORY...

- YAHOO is an acronym for "Yet Another Hierarchical Official Oracle".
- The world's most popular fruit is the tomato.
- Cherophobia is the fear of being too happy because 'something tragic will happen'.
- The number of Chinese killed by the Japanese in the WWII is greater than the number of Jews killed in the Holocaust.
- Pomology is the study of fruits.
- Elephants are genuinely scared of bees.
- 42% of people in the U.S have tried Marijuana once at least.
- During WW II Japan bombed China with fleas infected with bubonic plague.
- Queen Elizabeth II served as a mechanic and driver in WW II.
- Almost 80% of the males born in 1923 in Russia, did not survive in the WWII.
- The brain keeps developing until you are in your late 40s.
- Much before trees were common, the Earth was covered with giant mushrooms.
- New York is the most linguistically diverse city in the world with over 800 languages.

**Mifrah Mehmood,
Coordinator Media,
Media Affairs Department**

REWARDS & RECOGNITION

Sometimes, offering praise is harder than it should be. While at work, on a busy day, a compliment or a gesture of appreciation is rarely made. But praise can really make a team member's day. Here are some reminders of how easy it can be to appreciate an employee or colleague:-

1. I'm proud you are on my team.
2. Congratulations on a terrific job.
3. You are so helpful. Thank you.
4. You keep improving. Well done.
5. I really admire your perseverance.
6. You are a champion.
7. Wow, what an incredible accomplishment!
8. Great effort. You make us all look good.
9. I have great confidence in you.
10. You've grasped the concept well.
11. Your customer service skills are sensational.
12. You are a valuable part of this team.
13. Your efforts are really making a difference.
14. You make the team's vision come alive.
15. Customers are noticing the efforts you are putting in.

- Adapted from The Fun Factor, Carolyn Greenwich, McGraw-Hill
- Courtesy Management Outlook PIM



**Muhammad Aakash Bin Nasir
Officer HR, Grade-III**



Fun Facts about Natural Gas

- Natural Gas was produced beneath the earth around hundred thousand years ago.
- The people of China used Natural Gas to formulate salt around 200 B.C.
- Natural Gas is colorless and odorless and it is lighter than air.
- Gas utility Companies add a chemical named as 'mercaptan' which smells like rotten eggs to aid gas leak apparent.
- Natural Gas is measured in British Thermal Units (BTUs).
- Natural Gas changes from Gas into a Liquid form when the temperature is 260 degree Fahrenheit below zero.
- The electricity produced from Natural Gas results a cleaner environment because it does not produce any pollutants.

**Umar Saadat,
Coordinator PR,
Media Affairs Department**



HASHIM KHAN

Tribute and Obituary

The First sportsman to win a World championship for Pakistan in any sport "HASHIM KHAN" died on Aug 18, 2014, in USA, at the age of 100. He was a Legend in himself who won 7 (seven) British open Titles (the then de facto world championship) between 1951 and 1958 and established Pakistan's squash supremacy for the decades to come. His record was bettered by Geoff Hunt 1980 by winning 8 titles. Hunt's feat was surpassed by legendary JEHANIGR KHAN by winning 10 British Open. Hashim inspired his contemporaries including his brother, Azam, his cousin Roshan Khan, and nephew, Mohibullah Khan, who became world champions followed by their posterity Jahangir, and Jansher which enabled the "Khan Dynasty" to account for 23 British Open titles.

Hashim's achievements in squash are extraordinary. His fitness transcends his age as he won his first British open title at the age of 37 and the last one at 44. He was a self made player who learned the game by watching British officers in the local squash club in Peshawar before Partition. Sports analysts use to call him: "The Untouchable and the Zen Master of Squash." He was patriarch of not only Pakistan Squash but the entire sports generation of Pakistan. We pray that his soul may rest in eternal peace. Thanks for giving us our First National Pride in Sports --You the Gem of Pakistan.

**Mohammad Asim,
DCO-SNGTI**



Climbing Above and Beyond

SNGPL Sports Falak Ser (5918 meter) Mountaineering & Climbing Training Course

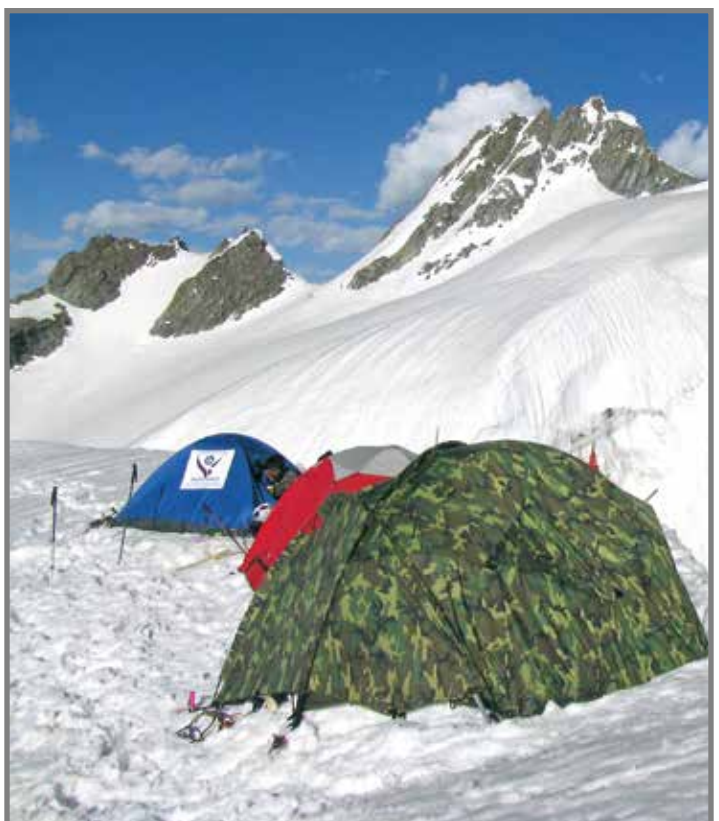
The sport of Mountaineering & Climbing is a sport of courage, endurance, commitment and persistence and in the nature with the nature. This year, SNGPL Mountaineering & Climbing Team organized a Training & Climbing Expedition on Falak Ser Peak (5,918 meter) in Swat Valley in June 2014. The aim was to upgrade the existing skills and to train the new comers in the sport. The team was led by veteran mountaineer Col. (R) Dr. Abdul Jabbar Bhatti for all the Training activities. The team consisted of the following members M Nasir Awan, Ahmed Mujtaba Ali, Sa'ad Mohamed, Asif Bhatti, Umar Siddiqui, Mehmood Rahseed, Shahzaz Mahmood, Shakeel Ahmed, Tanveer Sadiq and Gulfranz Baig.





The well-shaped pyramid of Falak-Ser replicates the K2 image and dominates all mountains in the surrounding area. Falak Ser peak is also locally known as little K2. Falak Ser is situated in Ushu Valley of Swat-Kohistan. At 5,918 metres (19,416 ft), it is considered the highest peak of the Swat district in the Hindu Kush Mountain Range. SNGPL Team's climbing strategy was based on Himalayan Style Expedition, with a full fledge Base Camp at the height of 4075 meters and Camp-I at 4800 meters and Camp-II established at the height of 5300 meters. The 5,918 meter high mountain is part of the Siri Dara Group of Hindu Raj Section of Swat. The team left Islamabad on 15th June and arrived at Kalaam the same day. After spending a couple of nights in Kalaam for height acclimatization, the SNGPL team left for Chashma Shifa (trail head) by jeep and trekked to the base camp 3,950m on the same day. It was a long and tiring day and the last besides that team members, reached the base camp at 9:30pm. The scenic value of the trail, in mid June, was however out of this world and there were numerous waterfalls along the way. After a rest day at the base camp, initial training sessions started for the next three days. The team descended about a 100m onto the south face of Flak Ser and made last ditch efforts for the summit.

M Nasir Awan
Admin Officer, HO





Protecting Workers from the Hazards of Abrasive Blasting

Abrasive blasting operation uses compressed air to direct a high velocity stream of an abrasive material to clean an object or surface, remove burrs, apply a texture, or prepare a surface for the application of paint or other type of coatings. Workers performing this task must be protected from hazards associated with this particular type of blasting.

Abrasive Blasting at SNGPL

At SNGPL, abrasive blasting (Silica Sand Blasting) is used for the surface preparation of steel gas pipes prior to applying coating as it saves gas pipelines against corrosion. The decision to use a certain type of abrasive material can depend on a number of factors such as the cost, job specifications, environment and worker's health.

The hazards associated with abrasive blasting are of significant importance and ample precautions as well as awareness is compulsory at all company

sites where its application is practiced.

Health Hazards associated with Silica Sand Blasting

Abrasive blasting operations can cause a rapid increase in the following harmful elements:-

Dust

Dust resulting from abrasive blasting comprises particles less than 1 micron (1/25,000 inch) to more than 1000 microns. Under normal conditions, dust particles of 10 microns or more in diameter settle relatively quickly. Those smaller than 10 microns remain airborne for a longer period of time and are easily inhaled. These dust particles often tend to settle in the lungs and sometimes smaller soluble particles dissolve into the blood stream.

A consequent product of sand blasting is silica dust (SiO₂). The most alarming health concern associated with the formation of this dust is Silicosis. Silicosis is caused when crystalline

silica particles less than 10 microns in diameter (respirable silica.) are inhaled and deposited in the lungs. This leads to debilitating lung disease. Various complications associated with Silicosis include development of Tuberculosis (T.B), lung cancer, autoimmune and chronic renal diseases.

Noise

Steady exposure to high noise levels and repeated exposure to loud impact noises can lead to permanent deterioration of the hearing system. An evaluation of noise levels and their duration should be conducted, particularly because potentially hazardous levels are not always apparent.

How to Protect Workers from Exposure to Abrasive Blasting Materials

Before beginning work, employers should identify the hazards and assign

a knowledgeable person trained to recognize hazards and with the authority to quickly take corrective action to eliminate them.

Use of engineering and administrative controls, personal protective equipment (PPE), including respiratory protection, and training to protect workers should be mandatory in all abrasive blasting activities / sites. Engineering controls, such as substitution, isolation and containment are the primary means of preventing or reducing exposures to airborne hazards during abrasive blasting operations. Administrative controls, including the use of good work ethics and personal hygiene practices, can also reduce exposure.



prevent the spread of any hazardous materials.

Personal Hygiene Practices

To prohibiting eating, drinking, or using tobacco products in blasting areas.

Worker Training and Hazard Communication

To provide training to abrasive blasters and support personnel on hazards associated with abrasive blasting. Awareness on how to use controls, personal hygiene practices, safe work practices the use of PPE and respirators; should also be imparted.

Personal Protective Equipment (PPE)

Use of personal protective equipment may include:

- Hearing protection
- Leather gloves that protect the full forearm and aprons (or coveralls)
- Safety shoes or boots
- Eye and face protection (Sand blasting hood)

Shahbaz Ali Jaffar
HSE Engineer Mul (D)

Engineering Controls

Substitution

- Use of less toxic abrasive blasting material.
- Use of abrasives that can be delivered with water (slurry) to reduce dust.

Isolation and Containment

- Use of restricted areas for non-enclosed blasting operations.
- Use of barriers and curtain walls to isolate the blasting operation from other workers.

Administrative Controls

Warning Labels and Signs

One of the most effective ways of helping to ensure safety. When working with abrasive materials, it is best to post signs or utilize labels which clearly identify hazards involved.

Personnel Control

To allow only authorized personnel to enter into sand blasting premises. To schedule blasting when the least number of workers are at the site.

Adequate Scheduling

To avoid blasting in windy conditions to



Portable Fire Extinguisher

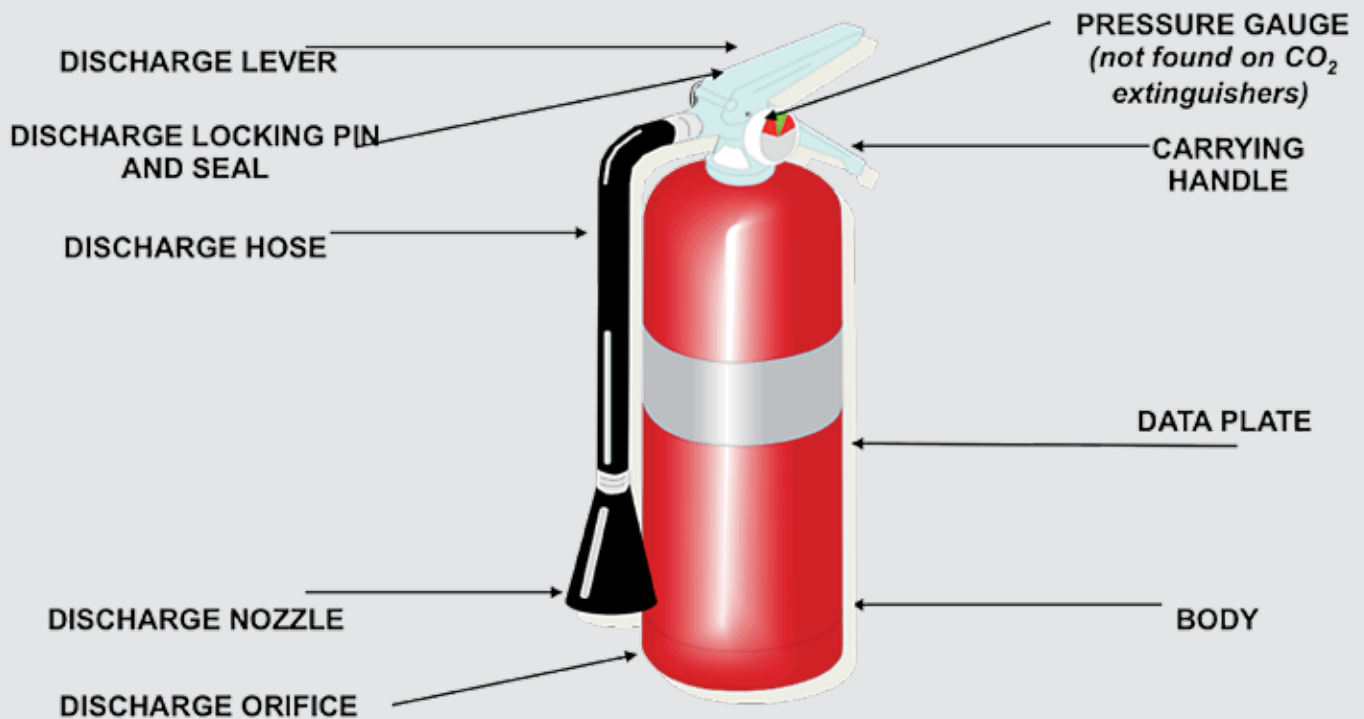
Portable Fire Extinguisher

A fire extinguisher is an active fire protection device used to extinguish or control small fires, often in emergency situations. Typically, a fire extinguisher consists of a handheld cylindrical pressure vessel containing an agent which can be discharged to extinguish a fire.

Definition of portable extinguisher:

An extinguisher which is designed to be carried and operated by hand and which, in working order, has a mass of not more than 20 KG.

Fire Extinguisher Anatomy



Fire Extinguisher Types

The type of fire extinguisher is determined by;

- a) The method of expelling the contents
- b) The extinguishing media contained within

a) Method of expelling the contents

Two methods exist:

- **Gas Cartridge pressure**

In these extinguishers, a small cylinder of compressed gas (usually CO₂) is screwed into the head cap inside the main extinguisher body. Upon operation, the cartridge seal is pierced allowing the CO₂ inside to build pressure in the main body and expel the contents.

- **Stored Pressure (Mostly recommended)**

In these extinguishers, the body of the extinguisher is permanently pressurized with a propellant gas (usually air or nitrogen). Upon operation, a valve is opened allowing the pressurized contents to escape. These types often have a pressure gauge to allow the user to easily check the serviceability of the extinguisher. The CO₂

extinguishers operate on the stored pressure method with the CO₂ stored as a liquid under its own vapor pressure.

b) Extinguishing media

- Dry Chemical Powder (DCP)
- Carbon Dioxide (CO₂)
- Foam
- Water
- Vaporizing liquids (Halotron)
- Wet Chemicals

Fire Extinguisher Manufacturing Standards



Fire Extinguishers commonly available in market are manufactured according to following standards / listings:

- EN3 standard (European)
- SASO standard (Saudi Arabian)
- UL listed (American)







Fire Extinguisher Color Coding (European Standard-EN3)

In order to indicate the type of fire extinguisher. Each fire extinguisher is to be color coded.

Color codes as per the European Standard (EN3), are as follows:

Water	Foam	Powder	CO ₂	Wet Chemical
Red	Red with a Cream Strip	Red with a Blue Strip	Red with a Black Strip	Red with a Yellow Strip
				

Fire Extinguisher Applications (European Standard-EN3)

Fire Class	Fire Extinguisher Type					
	Water	Foam	Powder (ABC)	CO ₂	Wet Chemical	Special Powder (D)
A Solids Wood Paper etc 	✓	✓	✓		OK	
B Liquids Petrol Grease etc 		✓	✓	OK		
C Gases Propane Butane etc 			✓			
D Metals Magnesium Lithium etc 						✓
Electrical Equipment 			OK	✓		
F Cooking Oils and Fats 					✓	

Electrical Equipments Fire is un-classified in EN standard



Especially effective on this type of fire

OK

Safe for this type of fire, but of limited capability – select a more appropriate type

Fire Extinguisher Allocation / Sitting

- Extinguishers should be fixed at an elevated height, so that the carrying handle is 1m from the floor for heavier units (heavier than 4kg) and 1.5m for smaller units.
- They should be near the door, on escape routes or adjacent to specific risks and away from extremes of temperature.
- Extinguishers should be within reasonable distance from any fire risk i.e. :
 1. Class A and C: 30m
 2. Class B: 10m
 3. Class D: case-by-case basis, by expert advice
 4. Class F: 10m

In order to improve fire fighting arrangements and keeping in line with international standards and best practices, SNGPL procured portable fire extinguishers in FY.2013-14, detail of which is given below:

Carbon Dioxide (CO ₂)	Dry Chemical Powder (DCP)	Aqueous Film Forming Foam (AFFF)	Dry Chemical Powder (DCP) for vehicles (1 kg)
764	299	99 8	32

Fire Extinguisher Inspection and Maintenance

Extinguisher should be routinely inspected by the user preferably at monthly intervals to make sure that it is in its proper position and has not been discharged or lost pressure.

Three levels of Maintenance:

- Basic** Annual inspection and servicing by competent person.
- Extended** Every 5 years, a basic service plus test by discharge and internal examination.
- Overhaul** Every 10 years for carbon dioxide extinguishers only- detailed inspection. and hydraulic pressure test to meet Pressure Systems Safety Regulations 2000.

“SMALL FIRES GROW RAPIDLY, WISDOM LIES IN FIRE PREVENTION.”

MUHAMMAD HASHIM
Engineer HSE



Group Photo of Interns of Kinnaird College and BSS – Lahore with Mr. Farrukh Majeed

Sponsorship of ECO Internship Programme 2014 by SNGPL in collaboration with WWF

Certificate Distribution Ceremony

WWF Pakistan is one of the leading organizations working for the conservation and protection of environment. WWF is working in Pakistan for over 43 years to conserve nature and ecological processes and has extensive environmental education campaigns to raise awareness about imperative environmental issues of Pakistan.

SNGPL has signed an agreement with WWF Pakistan for the Sponsorship of "ECO Internship Program 2014" through which, 2000 students of class 7 and above will be enrolled from Government and private educational institutions in Punjab, Khyber Pakhtoon Khawa and Azad Jammu and Kashmir.

The purpose of this programme is to make students focus on the importance of conservation as it is the need of the hour.

The Internship Programme is composed

of 5 sessions along with an optional exposure of field visits of students whereby the students are given a series of interactive activities and presentations to develop a sense of civic responsibility and teach them about the country's environment. WWF- Pakistan's ECO Internship Program published special communication material for displaying and promoting the campaign at different educational institutions. This includes brochures, posters, stickers etc. Almost 4300 students have been given orientation and more than 1400 students have been enrolled in the ECO Internship Programme 2014, till now, across different cities of Pakistan. The Internship Programme is continued and it is expected that the number of students will be more than 2000 in future. Thus, SNGPL and the International ECO Internship Programme are improving awareness regarding conservation and creating a sense of responsibility in the interns.

A Certificate Distribution ceremony was held by WWF Pakistan on 30th August, 2014 at WWF Head Office, in which Mr. Farrukh Majeed, Chief Engineer HSE - SNGPL was invited as the Chief Guest. Prizes were distributed to the 'High achievers' who performed with excellence in these sessions.

Mr. Farrukh Majeed, CE HSE - SNGPL on this occasion, emphasized the students to play a constructive role for the conservation of Energy, Natural resources and Environment in order to save the planet.

**ASMA MAQBOOL
HSE ENGINEER (Gr-III)**

“Unite To Fight Against DENGUE” “DENGUE is every body’s concern”



What is dengue?

Dengue is a mosquito-borne viral disease. It is spread by the bite of an infected mosquito called *Aedes aegypti*. Dengue does not spread from human to human.

Dengue mosquitoes bite during the day. The highest biting intensity is about two hours after sun rise and before sun set.

There is no vaccine or cure for dengue.

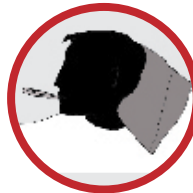


Protect · Prevent · Control

Symptoms

Symptoms of dengue include:

- Sudden onset of fever
- Severe headache
- Pain behind the eyes
- Severe muscle and joint pains
- Rash on the skin



When the dengue patient has bleeding, it is called **dengue hemorrhagic fever (DHF)**. Symptoms are usually seen 4-10 days after the bite of an infected mosquito, and last for 2-7 days.

Severe dengue is potentially lethal. Anyone showing symptoms of dengue should consult a doctor immediately.

Protection

- **Drain out the water from** desert coolers tanks, barrels, drums, buckets etc on a weekly basis.
- Remove all vessels holding water (e.g. plant holder plates) from the house. **Collect and destroy discarded containers**
- Wear full-sleeved clothes and long dresses to cover as much of your body as possible.
- Use mosquito repellents
- Use insecticide-treated mosquito nets even while sleeping during the day.
- Spraying insecticides with a fogging machine can slow down mosquito breeding and dengue transmission.



Treatment

There is no specific treatment for dengue.

The patient should

- take rest
- drink plenty of fluids and eat nutritious food
- Take paracetamol to bring down fever and joint pain, BUT avoid other medicines such as aspirin and ibuprofen as they increase the risk of bleeding.



Control

Measures under taken by the community, for the community, to prevent the breeding of mosquitoes are far more cost-effective than containment measures once an outbreak occurs.

Dengue prevention and control is a shared responsibility. Everybody needs to play their part in order to control dengue.

Individuals, communities, the private sector and government agencies (including non-health sectors) need to work together to fight dengue.

A proactive approach is needed. This means “moving from response-driven activities to long term prevention and preparedness-driven activities.”



Health, Safety & Environment Department
Sui Northern Gas Pipelines Limited

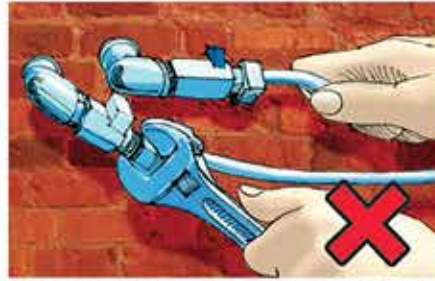


Early diagnosis and proper care by experienced physicians and nurses can frequently save lives.

Follow these instructions in case of gas leakage:



Turn off the service valve



Do not try to fix the gas leakage on your own



Open all windows and doors



Do not switch ON/OFF



Immediately evacuate the premises



Do not light a match to detect leakage

WATCH OUT FOR
GAS
LEAKAGES
SECURE YOUR **LIFE**

IMMEDIATELY CALL OUR
HELPLINE: 1199



SUI NORTHERN GAS PIPELINES LIMITED

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