

# JUNE 2018

SOCAR Polymer Newsletter / Issue 6 / 2018

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561  
Employees

16,573,886  
Man-hours LTI Free

99.7%

PP Total progress in  
June

96.1%

HDPE Total progress in  
June

 **SOCAR  
POLYMER**

# The countdown to the glorious hour begins



Dear colleagues,

Next month SOCAR Polymer will celebrate two remarkable occasions: the 5th anniversary since our company's establishment and the launch of our Polypropylene plant in Sumgayit, the construction of which alone has seen 3000 workers engaged simultaneously on site, 853 piles erected, 37,519 m<sup>3</sup> of RCC works done, 35,193 m<sup>3</sup> of concrete poured below and above the ground level, 4,775 tonnes of steel structures installed, and 400 pieces of equipment installed.

Licensed by LyondellBasell, the technology of production promises high quality products acquired through an ecologically safe process favourably characterized by smokeless flare and liquid waste managed professionally to keep the plant green through cooperation with the renowned Golder Associates environmental company.

The SOCAR Polymer plants will introduce Azerbaijan to the Turkish and European markets as the producer of not only LDPE, but also PP and HDPE in the Caucasus region. They can also take our domestic industry a step further –

to the manufacturing of value-added consumer products from polymers, with hundreds of new job openings and increased rates of GDP growth and export revenues.

The construction works are completed, and commissioning activities are drawing to an end. Very soon, SOCAR Polymer will present to the Azerbaijani people another industrial asset designed to take our nation a step farther in industrial and economic development making way for new and promising projects to be implemented in the future.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Farid Jafarov'. The signature is stylized and fluid, with a large initial 'F' and 'J'.

**Farid Jafarov**



June 2018

# Site Photos



# PROGRESS ON SITE DURING JUNE

## HDPE plant

May 2018

Progress over  
June 2018

June 2018



HDPE: Blending  
Silos.  
Pre-  
commissioning  
in progress



HDPE:  
Organoleptic  
Structure  
and Effluent  
Treatment.  
Instrument  
installation and  
cooling water  
lines erection  
ongoing





**HDPE: Extrusion Structure.**  
Roof insulation, sandwich panels and gypsum board installation works are ongoing. Piping erection and painting in progress



**HDPE: Polymerization.**  
Structural & piping works for Remote Operator Monitors are ongoing. Equipment cable connection ongoing



**HDPE: Electrical Substation.**  
Cabling and termination completed





HDPE: Pellet  
blower package  
space for logistic  
conveying.  
Piping works  
ongoing



HDPE: Reactor  
Dump tank.  
Electrical works  
in progress



HDPE: Catalyst  
Activation.  
Electrical,  
painting and  
piping works in  
progress





HDPE: Bagging  
& Packing.  
Cable laying  
ongoing



HDPE: Low  
Pressure Solvent  
Recovery.  
Hydrotest  
ongoing. Piping  
insulation and  
painting works  
ongoing



HDPE: Ethylene  
Treatment.  
Piping insulation  
and painting  
works ongoing



# PP plant and U&O area

May 2018

Progress over  
June 2018

June 2018



PP/U&O: Electrical substation.  
Punch List closing in progress



PP/U&O: Administration building.  
Punch List closing in progress



PP/U&O: Common Control Room.  
Punch List closing in progress



PP/U&O: Workshop.  
Punch List closing in progress



PP/U&O: Chemical & Additives Storage Building.  
Punch List closing in progress



PP/U&O: Bagging & Packing Building.  
Punch List closing in progress



PP/U&O: Laboratory.  
Punch List closing in progress



PP/U&O: Fire water Retention Basins and Pump House.  
All works completed





PP/U&O: Air/HP Nitrogen Condensate Compressor Station's Storage & Pumping facilities.  
Punch List closing in progress



PP/U&O: Homogenization / Blender Silos.  
Punch List closing in progress



PP/U&O: Cooling Tower.  
Punch List closing in progress



PP/U&O: PP-Wet section / Polymerization.  
Punch List closing in progress



PP/U&O: Flare Stack.  
Punch List closing in progress



PP/U&O: PP Dry Section / Extrusion building.  
Punch List closing in progress



PP/U&O: Valve house.  
Punch List closing in progress



PP/U&O: PP Dry section / Powder Silos.  
Punch List closing in progress



PP/U&O: Gate/  
Guard House.  
Punch List  
closing in  
progress



PP/U&O: Raw  
Water Storage  
Tank.  
Punch List closing  
in progress



PP/U&O:  
Isobutane Sphere.  
Punch List closing  
in progress



Nitrogen package.  
Works completed



Warehouse.  
Joint sealing works completed. Painting works in progress



Permanent PS System.  
Cable pulling in progress



Razor Wire on the Perimeter Fence.  
Razor wire fabrication and installation in progress



Roads.  
Excavation and compaction works in progress

# Project progress status

## PP Plant Progress

### Disciplines

### Cumulative Progress

Detailed Engineering



**100%**

Procurement Orders



**100%**

Subcontracting



**100%**

Material Supply – Manufacturing and Delivery



**100%**

Construction



**99.8%**

Overall



**99.7%**

## HDPE Plant Progress

### Disciplines

### Cumulative Progress

Detailed Engineering



**99.9%**

Procurement Orders



**100%**

Subcontracting



**100%**

Material Supply – Manufacturing and Delivery



**99.7%**

Construction



**92.8%**

Overall



**96.1%**

# OPS Trainings



OPS (operations) trainings are offshore/onshore trainings conducted for SOCAR Polymer's operation/maintenance/laboratory staff to expand their theoretical knowledge and practical skills regarding the technical aspects of operating/maintaining various types of equipment/facilities installed at the PP plant. Trainings are arranged

by Tecnimont, SOCAR Polymer or Fluor, and are delivered at vendors' facilities abroad or at appropriate institutions in Azerbaijan.

In the month of June, SOCAR Polymer employees attended the following trainings abroad:

OFFSHORE TRAININGS					
Training theme	Company/Location	Duration	Dates	Number of participants	Participants' positions
<b>MA (TEAL) Safety</b>	Akzo Nobel Netherlands	4 days	26-29 June	1	1 environmental specialist

# On-the-job training sessions at the SOCAR Polymer plant site

The EPC contract with the Tecnimont company includes trainings which the Kinetics Technology (KT) company has been provided on daily basis since 28 August. An extensive Training Program has been carried out since August 2017 to date, covering all aspects of plant operations and envisaging both Classroom training (480 hours total) by various specialists and vendors, and On-job training (1050 hours total) to be led by experienced technicians until the end of the project to ensure complete grooming of SOCAR Polymer operators to efficiently handle the Plant. An operation readiness and start-up team from South Africa comprising specialists with more than 30 years' experience in the petrochemical industry was engaged to conduct on-the-job trainings, to coach and support the professional development of national staff to ensure safe and flawless operation of the new plant. The trainings are listed under four major disciplines/categories: electrical, instrumentation, mechanical and operation. Thus, the SOCAR Polymer plant personnel gets a better understanding of the principles of equipment operation, and grows better informed of the basic maintenance and troubleshooting processes. More detailed information on some of the training sessions conducted on site in June is provided below:



Training title	Training Vendor	Duration	Dates	Number of participants	Participants' positions
<b>LOTO</b>	SQA Group	1 day	4 June	28	23 plant operators, 4 shift supervisors, and 1 compliance team lead
			5 June	19	11 plant operators, 1 shift supervisor, 2 electrical supervisors, 2 mechanical supervisors, 1 instrument supervisor, 1 maintenance superintendent, and 1 junior shift HSE advisor
			6 June	18	12 plant operators, 3 mechanical supervisors, 1 shift supervisor, 1 HSE advisor, and 1 junior plant operator
			7 June	17	6 plant operators, 3 mechanical supervisors, 1 shift supervisor, 2 electrical supervisors, 1 HSE advisor, 1 junior shift HSE advisor, 1 instrument supervisor, 1 bagging/dispatch operator, and 1 maintenance superintendent
<b>PTW</b>	SQA Group	1 day	4 June	28	23 plant operators, 4 shift supervisors, and 1 compliance team lead
			5 June	19	11 plant operators, 1 shift supervisor, 2 electrical supervisors, 2 mechanical supervisors, 1 instrument supervisor, 1 maintenance superintendent, and 1 junior shift HSE advisor
			6 June	18	12 plant operators, 3 mechanical supervisors, 1 shift supervisor, 1 HSE advisor, and 1 junior plant operator
			7 June	17	6 plant operators, 3 mechanical supervisors, 1 shift supervisor, 2 electrical supervisors, 1 HSE advisor, 1 junior shift HSE advisor, 1 instrument supervisor, 1 bagging/dispatch operator, and 1 maintenance superintendent
<b>Forklift Driving</b>	SQA Group	4 days	4-7 June	2	2 plant operators
			29 May - 1 June	3	3 plant operators
<b>Standard First Aid, CPR and AED</b>	OTI	2 days	5-6 June	3	3 laboratory analysts
<b>ERTM/ERTL</b>	OTI	5 days	20-24 June	15	9 plant operators, 4 shift supervisors, and 2 bagging/dispatch operators

# Trainee report on MA/TEAL training



**Kamran Babayev**  
Environmental Specialist

The purpose of my participation in the training in the Netherlands was to obtain more comprehensive information about the Metal Alkyl (TEAL) chemical compounds that are used as co-catalysts in the SOCAR Polymer Plants. The training was carried out by the AkzoNobel Company which is one of the advanced manufacturers of modern paints and special chemicals, with a wide range of metal alkyls including aluminum, magnesium, boron and zinc alkyls.

The training course covered various topics including the hazard class properties, combustion capacity, and compatibility of Metal Alkyl (TEAL) chemical compounds, means of fire control, firefighting, personal protective equipment, first aid, packaging and unloading procedures, repair and maintenance procedures, control measures, etc. Based on a variety of cases taken from AkzoNobel's

rich experience, the training sessions were conducted in different areas of AkzoNobel's chemical plant fully adapted for different types of training experiments and simulations.

Two trainers possessing extensive experience in managing work involving metal alkyls dedicated one half of a day to lectures and the other to practical training. Both sessions were very interesting. I consider very useful the knowledge and skills I've gained on the topics of fire extinguishing in case of metal alkyl leakages and on prevention of chemical spills. Practical exercises on methods of metal alkyl unloading constituted the most difficult part of the training.

In order to share with my colleagues the knowledge I've gained during this quite effective training course, I have prepared a training presentation and presented it to the employees of various departments at our plant to promote the implementation of safety and environmental protection measures in compliance with the best international practice. I am thankful to the SOCAR Polymer administration for my participation in this training course.

# SOCAR Polymer Plant Laboratory inhabited

With a site footprint of 30 hectares that accommodate 2 polymer production units, a utilities infrastructure, a bagging & packing facility, and a warehouse, the SOCAR Polymer plant site also houses laboratory facilities for testing feedstock (in-process tests) and products (intermediate and final product tests).



## **Mechanical completion**

The laboratory premises comprise 920 square meters of total area, with about two dozen rooms including well-equipped analytical test rooms (GC, chemical, mechanical, spectroscopic, extrusion, physical and other test rooms), sample storage room, reagent room with cabinets and bench top fume hoods, carrier gas cylinder room, oven room, airlocks, personnel locker rooms, genitor room, 2 office rooms, and a pantry.

As is typical for a chemical quality control laboratory, the rooms are designed to provide an adequate number of equivalent linear feet (ELF) of work surface per person. Work involving hazardous chemicals is performed in chemical hoods, large enough to provide each person with a minimum of 3 linear feet, depending on the planned activities and type of chemistry. Instruments are set

on benchtop surfaces, and those which do not fit on a bench can be set on the floor. As in any laboratory, some services and surfaces are fixed elements, such as sinks and chemical hoods, but with some furnishings and services that can be moved and adapted quickly there are several options available to meet the adaptable needs for various types of activity to allow for changes in laboratory use. The laboratory building is resistant for designed blast pressure. Work surfaces are chemical resistant, smooth, and easy to clean. Benchwork areas have knee space to allow for chairs near fixed instruments or for procedures requiring prolonged operation.

Work areas, including computers, incorporate ergonomic features, such as adjustability or task lighting. Adequate space is allowed for ventilation and cooling of computers and other electronics.





Walls are finished with material that is easy to clean and maintain. Depending on the room function, flooring is either chemical resistant, hardened, or covered with non-skid ceramic tiles. Certain doors, frames, and walls are fire-rated compliant to the fire code.

Doors have view panels to prevent accidents caused by opening the door into a person on the other side and to allow individuals to see into the laboratory in case of an accident or injury. Doors open in the direction of egress.

The laboratory rooms do not have operable windows, particularly where there are chemical hoods or other local ventilation systems.

### **Safety Equipment and Utilities**

The laboratory has an adequate number and placement of safety showers, eyewash units, and fire extinguishers.

The laboratory has abundant electrical supply outlets to eliminate the need for extension cords and multiplug adapters.

Emergency power needs have been assessed and provided for.

The ventilation system of the laboratory, whether it is the general ventilation, a chemical hood, or a specialized exhaust system, is a critical means to control airborne chemicals.

A differential exists between the amount of air exhausted from the laboratory and the amount supplied to the laboratory to maintain a negative pressure between the laboratory and adjacent spaces. This pressure differential prevents uncontrolled chemical vapours from leaving the laboratory. There is separation between common spaces and the test rooms to prevent migration of airborne contaminants. 3

airlocks have been installed at the entrances to the building and to the physical test room.

Laboratory chemical hoods are the most important components used to protect laboratory personnel from exposure to hazardous chemicals and agents. Functionally, a standard chemical hood is a fire- and chemical-resistant enclosure with one opening (face) in the front with a movable window (sash) to allow user access to the interior. Large volumes of air are drawn through the face and out the top into an exhaust duct to contain and remove contaminants from the laboratory. Hoods offer a substantial degree of protection to the user. Separate vented cabinets are provided for the storage of toxic or corrosive chemicals. General ventilation systems control the quantity and quality of the air supplied to and exhausted from the laboratory. The general ventilation system ensures that the air is continuously replaced so that concentrations of odoriferous or toxic substances do not increase during the workday and are not recirculated from one laboratory space to another.

Air always flows from the offices, corridors, and support spaces into the laboratory spaces. All air from chemical laboratories is exhausted outdoors and not recirculated.

The installed heating and cooling systems are adequate for providing the comfort of laboratory occupants and operation of laboratory equipment.

### **Personnel**

The laboratory personnel moved into the laboratory building to man their stations in May of 2018. The laboratory team currently numbers 26 people, including the Head of the Laboratory, 19 lab analysts, 4 senior lab analysts and 2 laboratory engineers, one for each of the PP and HDPE



plants. Since the laboratory will be working round-the-clock with shifts changing every 12 hours: at 8 a.m. and 8 p.m., the personnel have been divided into 4 shifts. Each shift team consists of 1 senior lab analyst who acts as a shift supervisor and 3-4 lab analysts, who divide to attend to samples from both the PP and HDPE plants.

### Trainings

While the laboratory was under construction, the laboratory personnel was undergoing intensive trainings to be ready

to support the plant upon start-up. The team recruited in 2017 has received more than 25 independent specialized and general laboratory trainings on application of testing equipment including Gas chromatographer (GC), High Performance Liquid Chromatographer (HPLC), Inductively Coupled Plasma (ICP) Instrument, Viscosimeter, Moisture/Oxygen/Reduction Gas Analyzer, Karl-Fischer Titrator, Mini Extruder, Cast Film Extruder, Melt Flow Rating instrument, Tensile Tester, HDT/Vicat, Izod/Charpy Instruments, and so on.

Training topic	Training venue and vendor	Training dates	Number of participants	Participants
<b>Safety/ Laboratory training</b>	Garshi, Uzbekistan Shurtan Gas-chemical Complex, UZBEKNEFTGAZ	19 Feb - 9 Mar 2018	5	1 senior laboratory analyst, 4 lab analysts
<b>Quality Control</b>	Lillo, Belgium INEOS	8-14 Apr 2018	2	1 senior lab analyst, 1 dayshift lab engineer
<b>OPS-Laboratory training</b>	Ferrara, Italy LyondellBasell	12-23 June 2017	8	1 senior lab analyst, 7 lab analysts

Training topic	Training vendor	Duration	Number of participants	Participants
<b>Standard First Aid, CPR and AED</b>	OTI	5-6 June 2018	3	3 laboratory analysts
<b>Basic Supervisory Skills</b>	HRC	7 May 2018	5	2 senior lab analysts, 3 laboratory analysts
<b>Emotional Intelligence</b>	HRC	25 Apr 2018	5	2 senior lab analysts, 3 laboratory analysts
<b>Seat Belt Awareness</b>	SP	27 Feb 2018	19	1 senior laboratory analyst, 17 lab analysts, 1 lab engineer
<b>General Lab Training</b>	Tecnimont	25 Sep 2017	41	41 lab analysts
<b>First Aid</b>	OTI	5-6 Dec 2017	2	2 lab analysts
<b>PP technology</b>	FLUOR	23 May – 6 June 2017	8	1 senior lab analyst, 7 laboratory analysts



**Sevil Khalilova**  
Senior Laboratory Analyst

The laboratory shall support the production process by providing the analysis of polymer pellets' chemical, mechanical and physical properties. If the Control Room is the brain, the Laboratory is the taste sensor of this whole organism our plant is. Our lab team has come up with its own registered methods uniquely developed for this project. We shall be applying 43 internal analysis methods for PP testing, and 48 for HDPE, all based on licensor methods. The standards our laboratory complies with include, among others, ISO and ASTM. We shall be certifying the quality of our products based on a range of chemical, mechanical and physical tests.

I joined SOCAR Polymer in October of 2017. Before that I worked as a Senior Science Researcher at the Institute

of Petrochemical Processes of the Azerbaijan National Science Academy. In 2013/14 I acted as a guest scientist at the Helmholtz Zentrum Munchen GmbH in Germany, investigating Azerbaijan oil and oil products with different analytical methods. "Helmholtz Zentrum Munchen" is one of the leading scientific research centers in Europe, doing research in environmental sciences.

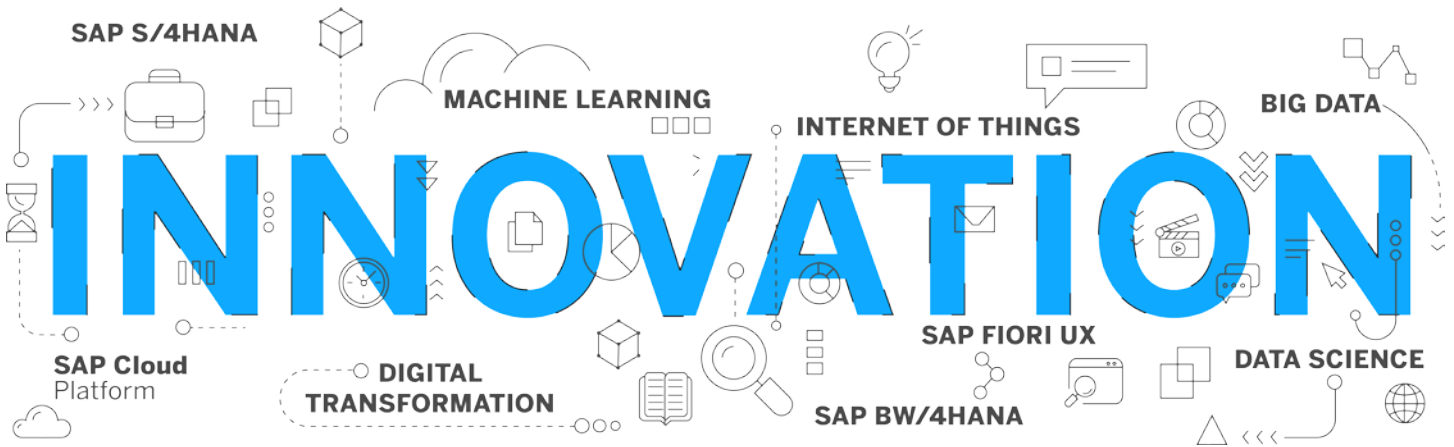
My academic journey into the depths of the chemistry science had started at the Baku State University. The title of my research paper for the Master's degree was "synthesis and investigation of some derivatives of 2-allyl 4-methyl and 2-allyl 4-acetoamine phenol". Later, at the Institute of Petrochemical Processes of Azerbaijan National Academy of Sciences (ANAS) I worked on a project titled "Acquisition of high molecular weight hydrocarbons through catalytic decarboxylation of unsaturated acids of vegetative origin". I have published 18 articles in local and international journals and given presentations at a number of international conferences and seminars in different countries such as Germany, Belgium, Sweden, Turkmenistan, and Russia.

What is most interesting about my employment at SOCAR Polymer is that I have finally moved from theory to practice. The laboratory team are all young and progressive specialists, ready to start the work. It is a huge responsibility to check the quality of the results of many peoples' efforts. We all are dreaming of the plant launch day and looking forward to first batches of products. We have come a long way preparing to play our part, and it will soon be time to act.

Starting from June 1, the lab personnel divided into 4 shifts is providing 24/7 functioning of the laboratory. To make up for the division and celebrate the time when we were seeing our colleagues every day, we decided to arrange a 3-day collective journey to Tbilisi at the end of May. Sixteen of us made that trip which enriched the stock of the positive memories we keep of our consolidated team and the first year of its establishment.



Celebrating unity by making a collective trip to Tbilisi (Georgia) before the lab personnel is divided into 4 shift teams



# Systems, Applications, and Products in Data Processing

SAP is a business application software designed to integrate corporate business processes. It provides a real-time entry, analysis and processing of data and makes the information available to all participants. It helps mitigate risks, generates reports, gears up decision-making, improves efficiency and drives value. It ensures agility, transparency and accountability.

An effective digital economy tool, SAP is a resource of building competitive advantages for transnational business operations and small-size business endeavours alike.

**1972** Five former IBM employees started a company they called SAP - Systemanalyse und Programmentwicklung (*System Analysis and Program Development*). Night owls, they had one customer and worked mainly at nights and on week-ends, all to transform the IT industry for ever eventually.

**1977** SAP and its 25 employees generated DM 3.81 mln in revenue, developed their own trademark and proved international viability by developing foreign language versions for first international clients.

**1973** SAP completed its first financial accounting software – RF. This system served as a cornerstone in the ongoing development of other software modules that would eventually bear the name SAP R/1.

**2018** Headquartered in Walldorf, Germany, with 350,000 customers in 180 countries, SAP SE is a multinational company offering software solutions for managing business operations and customer relations.



# SOCAR & SAP UOM

## Upstream Operations Management



SOCAR was among the first global oil majors to join the SAP community in 2008 and swiftly turn into a power user. Seven years later, SOCAR was awarded the CIS Quality Award golden prize for effectively transforming business operations via modern technologies.

In 2016 SOCAR, aided by SAP Service and Support,

kickstarted the implementation of SAP UOM – an integrated information platform for monitoring and control of oil production processes at all stages, starting with geological surveys and explorations all the way through to taking of valve readings by a shift foreman. The implementation of the software reportedly allowed to reduce the risks of production losses at 80%.

# SOCAR Polymer & SAP ERP

## Enterprise Resource Planning

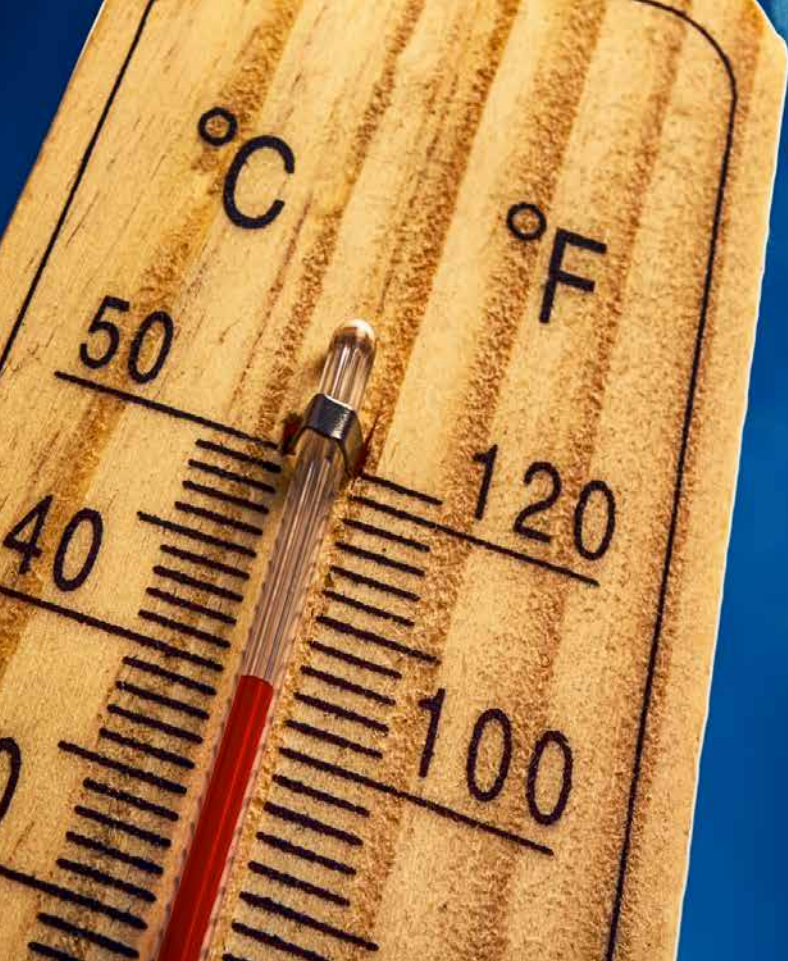


As with any disruptive technology, it's not so much about the costs of having it installed, rather than the nerve of getting the workforce to adopt, explore and practice it. Every time everywhere the first response is naturally that of rejection. Why spend valuable office hours on learning to do the same things differently if routine ways work just fine?

For a good reason of cost-efficiency, time should be invested in learning and training, so as much more time is saved in the future.

SOCAR Polymer SAP Team makes sure all works smoothly, and this link will help refresh your memory of who they are:

*Think digital, act responsibly, share transparently*



# HSE

# ALERTS:

## How to deal with hyperthermia


By June 4, 2018 the HSE Team reached a benchmark of 16 M man-hour LTI-free. Translated into conversational language it means, that hundreds and thousands of people have been working uninjured on the SOCAR Polymer construction sites, never mind the surgical precision of some of the assemblage works, nor the sometimes extreme weather conditions.

Semi-arid Sumgait climate is identified as Bsk in Köppen–Geiger climate classification system, the one most widely accepted internationally since the early XX century.

While August is the hottest month with averages closing on 30°C and extreme wind storms factoring in all year round, heat waves may strike unexpectedly before August. Such was the case in June.


Striving to keep the people, the environment, and the equipment safe and sound, and the record untarnished, the HSE Management makes safety walk-downs their weekly routine, drawing out the signs of negligence in most remote site corners for immediate action. The detailed accounts of such walk-downs are displayed on the bulletin board in the public areas of the HSE building for everyone to be aware, alongside the latest site progress updates, community news, useful tips and heaps of bottled water.

We found this one of a particularly timely and practical consequence:




**HEAT WAVE,  
VERY HIGH TEMPERATURES**


TIPS TO HELP YOU COPE




Moisten your skin with water and use a fan




Make sure you eat enough




Keep your home cool: keep the shutters closed during the day




**DRINK WATER REGULARLY**



Avoid drinking alcohol



Keep in touch with friends and family



Avoid strenuous activities

A heat wave is a period of excessively hot weather, which may be accompanied by high humidity. The term is applied both to hot weather variations and to extraordinary spells of hot which may occur only once a century. A heat wave is considered extreme weather, and a danger because heat and sunlight may overheat the human body. Heat waves can usually be detected using forecasting instruments so that a warning call can be issued.

# Heat stress and dehydration

Hot conditions put your body under a lot of stress. If heat is combined with physical activity, loss of fluids, fatigue and other conditions, this can lead to a number of heat-related illnesses and injuries. Even death is possible. Six main factors are involved in causing heat stress:

- Temperature
- Humidity
- Movement of air
- Radiant temperature of the surroundings
- Clothing
- Physical activity

Adjusting to these factors and/or controlling them reduces the chance of heat stress. Your body can adjust to working in a warm environment through a process known as "acclimatization." Acclimatization processes involve gradually increasing the amount of time you spend working in a hot environment. This gradual increase allows your body to properly adjust to the heat.

Administrative controls are also effective in preventing heat stress injuries:

- Increase the frequency and duration of rest breaks
- Schedule tasks to avoid heavy physical activity during the hottest parts of the day
- Provide cool drinking water and encourage its consumption
- Use additional workers for the job or slow down the pace of the work
- Make sure everyone understands the signs and symptoms of heat stress

**There are two types of heat illness. Watch out for early signs of heat exhaustion or heat stroke.**

## Heat exhaustion symptoms:

- Dizziness
- Headache
- Sweaty skin
- Fast heart beat
- Nausea/vomiting
- Weakness
- Cramps

## Heat stroke symptoms:

- Red, hot and dry skin
- High temperature
- Confusion
- Fainting
- Convulsions



Victims must receive immediate treatment to prevent serious illness. First, get the person to a shady area and cool them by removing clothing, applying water to the skin, and/or applying ice packs to armpits and groin. Have them drink water and notify emergency response.

# HDPE Wicker makes a profitable business

## Garden furniture market overview

A recent paper in the Market Research Reports Repository forecasts the expansion of the global market for garden furniture at compound annual growth rate of 4.9% from 2017 to 2022. Basically, it means the growth rate that gets you from the initial investment value to the end investment value. Asia-Pacific excluding Japan will continue to account for the largest revenue share, with Malaysia, Indonesia, the Philippines, and China at the top of the list. In Europe, the UK, France, and Germany are the countries that are expected to continue driving this rising demand even at a higher CARG. London, Paris, Berlin – they have been the trend-setters and fashion capitals for the world since the industrial era.

Market researchers note the surprising shift towards the greater demand for better quality pieces. The furniture should not only function well, it should look good. Customers have become savvier, better informed, they have done their research, they know what they want from their new furniture, design- and material-wise. People want to replace basic vinyl with quality metal, timber and HDPE. They are prepared to invest in their homes and gardens,

trading up to more sophisticated foyer, patio and kitchen sets. Stuff that's built to regular indoor and outdoor dining and entertaining, providing all day comfort, capable to stand up to the elements and last.



## Wickerwork

Natural wicker is made from plant fiber. Every culture on earth has known weaving. People wove anything that grew in their locale: lime bast, birchbark, pine tree, palm tree, bamboo, spruce and fir tree roots, willow trees, grape-vines, thatches, reeds, sugar canes, hazel bush, lianas, you name it.

They wickerworked dinner tables, coffee tables, chairs, armchairs, chaise-longues, loveseats, banquettes, cribs, beds, chest of drawers, wardrobes, credenzas. And baskets, of course, of any form and size.

In the 1950s, the rattan furniture seized the global market. Also known as manila or malacca, named after the ports of shipment Manila and Malacca City in the Philippines and Malaysia, it is a liana, whose flexible woody stem makes it commercially viable for furniture manufacturing.

The staff would chip, scratch and rip, fade, wither, rot, grow moldy and smelly and require replacement, ultimately. Unfortunately for patio, balcony and outdoor verandas...



## The invisible hand of free market

Meanwhile natural timber sources dwindled. In 2012, the Indonesian Government declared a moratorium on rattan export, and the neighbours followed suit. By then, however, HDPE rattan has been synthesized and HDPE furniture, matching any taste and budget, made a triumphant market advance.

HDPE wicker, highest quality resin, is made out of a compound that is very dense so that it is extremely durable in all outdoor conditions. Mind it, the exterior layer would never peel off to reveal a mismatched color. It lives to reveal resilience to UV, salt water and chlorine. It is resistant to stain and requires no maintenance costs. It won't change temperature even if left behind under the blazing sun, it remains cool to the touch and won't stick to skin as leather or vinyl.

Luxury hotels and gastronomy restaurants made the finest garden furniture out of HDPE that stands nicely for all four seasons.

And yes, HDPE is 100% Recyclable unlike other resin wicker.

## How to weave a profitable business

A swell in construction industries – housing, cottage estates, suburban settlements – entails HDPE wicker market growth. Nowadays, even our die-hard grannies tend to slacken their grip on the green plastic.

The wicker business has plenty of competitive advantages. Weaving shops take minimal investment, particularly if organized on local feedstock and using manual labour. Synthetic or not, weaving take hands to do the job. Access to the market is relatively easy and affordable. You may want



to go industrial- scale and use machine wickerwork. Should the market go down, you can downsize accordingly, to pre-ordered limited series. Design and colours are virtually limitless, to satisfy the most hazardous clients.

This is the type of business that is rather fashionable phasing out outrageously expensive imports, while at the same time it lets you enjoy your garden, backyard, lawn, balcony veranda and patio all year round. Staying completely GREEN, mind you!





[www.socarpolymer.az](http://www.socarpolymer.az)

OPENING NEW FRONTIERS  
IN THE PETROCHEMICAL  
INDUSTRY OF AZERBAIJAN

 **SOCAR**  
**POLYMER**