

# AUGUST 2017

SOCAR Polymer Newsletter / Issue 8 / 2017

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8,648,586

Man-hours LTI Free

332

Employees

90.9%

PP Total progress in August

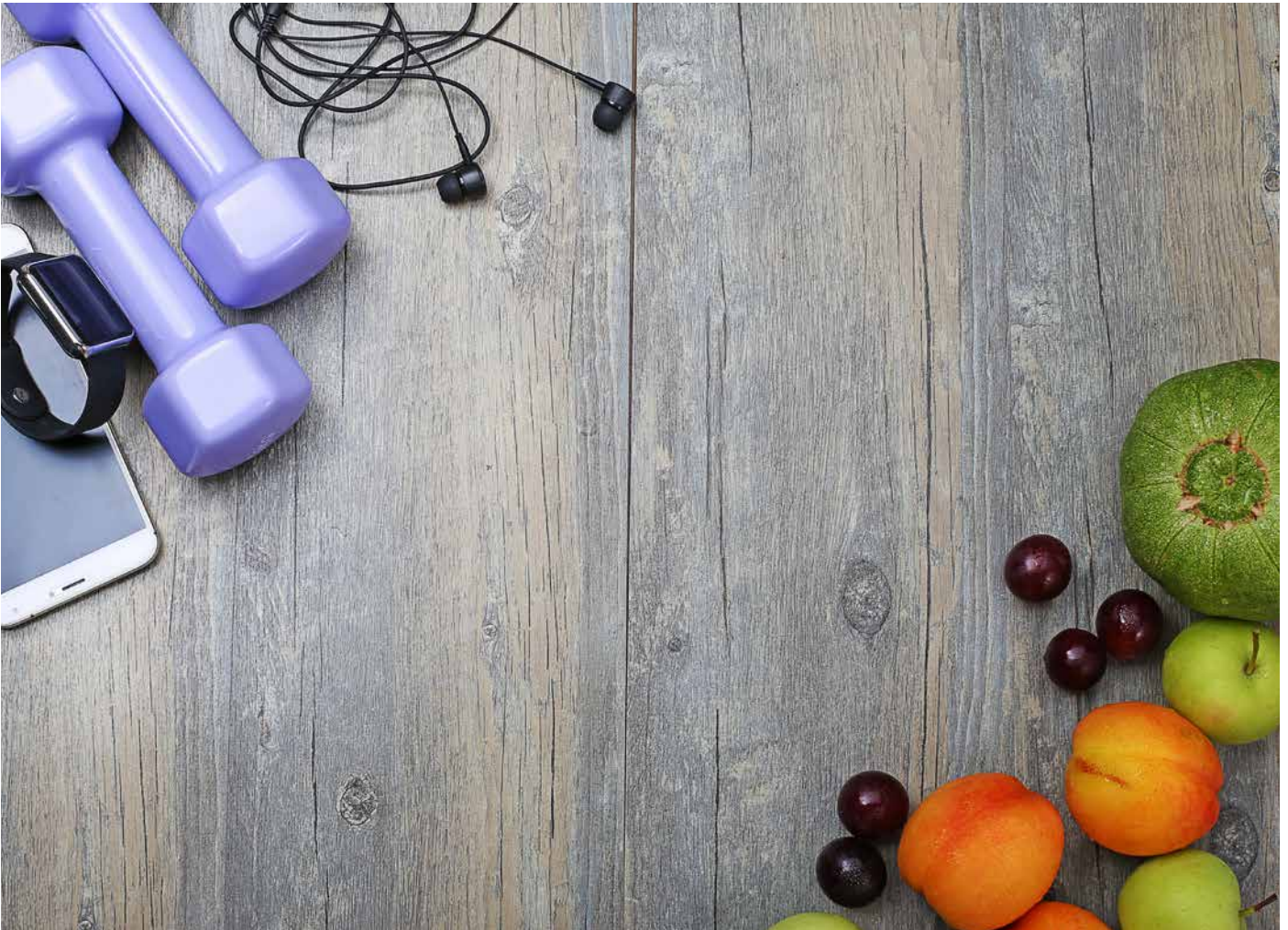
70.6%

HDPE Total progress in August





# Encouraging a healthier workforce



Dear team,

The construction of the PP plant is nearing completion, with the HDPE plant following closely, and there is a lot of work to be done in the months before their successful start-up. With almost 9 million LTI-free man-hours accomplished and the pre-commissioning activities carried out with positive results, it is pleasant to note that our integrated team has demonstrated commendable performance. SOCAR Polymer has always considered employees the best asset of the company and has made efforts to provide care for its employees so that they combined a busy working life with a fit and healthy lifestyle. Employees, whose busy work life leaves no room for a physical exercise are more susceptible to stress, fatigue and burnout. Therefore, our company emphasizes the importance of looking after your health and fitness outside of the busy office, and has brought in workplace initiatives to help employees become more aware of your health and fitness by attending fitness centres, active game courts or

swimming pools. Personally, I am happy to know that many of our team members engage in sports. SOCAR Polymer's soccer team activities, as well as the various annual sports events supported by our company such as mountain hikes or marathons make our office a healthier and a happier workplace.

**Farid Jafarov**





August 2017

# Site Photos





# PROGRESS ON SITE DURING AUGUST

## HDPE plant

RCC works have been completed in the Polymerization area, but are continued in the Organoleptic/Effluent Treatment and Extrusion areas.

Installation of the Reactors Dump Tank has been completed.

SS installation works are ongoing in the Polymerization and Extrusion pipe rack areas.

Pipe support installation is ongoing at the pipe racks of the Polymerization, Extrusion, and Solvent recovery/Steam condensate areas.

Equipment installation is ongoing in the Polymerization area.

Internal finishing and HVAC works are ongoing in the E/Substation area.

Preparation works for equipment installation have started at the Pellet blower package space and are continued at the Blending silo site.

Cable tray installation has started at the pipe racks of the Polymerization and Extrusion areas.

July

Progress over August

August



**HDPE:**  
**Blending Silo.**  
Preparation works for tank installation are ongoing



**HDPE:**  
**Organoleptic Structure and Effluent Treatment.**  
RCC works ongoing







HDPE:  
Extrusion  
Structure.  
RCC works  
ongoing



HDPE:  
Polymerization.  
RCC works  
completed.  
SS installation  
ongoing.  
Equipment  
installation  
started



HDPE:  
Electrical  
Substation.  
Internal  
finishing and  
HVAC works  
ongoing.  
Electrical panel  
installation  
started



HDPE:  
Extrusion Pipe  
Rack.  
Pipe support  
installation  
ongoing. SS  
installation  
ongoing. Cable  
tray installation  
started







HDPE: Solvent recovery and Steam condensate area Piperack. Pipe support installation ongoing



HDPE: Pellet blower package space for logistic conveying. Preparation works for equipment installation started



HDPE: Reactors Dump tank. Tank installation completed



HDPE: Polymerization Pipe Rack. Pipe support installation ongoing. Cable tray installation started

# PP plant and U&O area

Works reported as started or ongoing in July have been continued throughout August, with the following works completed or initiated in August in the areas specified hereafter.

Heavy duty paving in the Warehouse area is completed, truss installation is ongoing and sandwich panel roof installation has started.

First layer of asphalt is laid on some internal roads.

Panel installation has been completed at the E/Substation, but is ongoing in the Common Control Room.

Workshop crane installation is completed. Pump installation is completed at the Impounding basin for Isobutane.

Sprinklers' installation is completed at the Cooling Tower.

Roof waterproofing works are completed in the Administration building.

Painting and thermal insulation of the DM water storage tank is completed.

Cable tray erection is ongoing at the E/Substation and Cooling Tower.

Cable pulling is ongoing in the areas of the E/Substation, Common Control Room, Interconnecting pipe racks, and Pipe sleepers.

SS installation is ongoing in the Bagging and packing building, and Nitrogen Package area.

Pipe installation/connection is completed at the Flare

Knock out Drum, started at the Flare stack and Impounding basin for isobutane, and ongoing in the areas of the Valve house, Side stream filter package, Raw water storage tank, Interconnecting pipe racks, Pipe sleepers, Hexene storage tank, Isobutane Sphere, and Nitrogen package.

Pipe testing has started at the Flare knock out drum.

Façade painting is ongoing at the Valve house, and façade works have started at the Chemical additives storage building.

Equipment installation is ongoing at the Cooling tower, Flare Stack, Polymerization section, Extrusion Building, Blender Silo and Powder Silo areas.

Pump and pipe installation is ongoing at the Fire water pump house, Cooling Tower, and Blender Silo areas.

Equipment and pump alignment has started at the Fire water pump house, and is ongoing at the Nitrogen Condensate Compressor Station, Powder silo, and Blender silo.

Installation of electrical instrumentation has started at the Nitrogen Condensate Compressor Station, Polymerization, and Blender Silo areas.

Interior finishing works are completed at the Gate/Guard House, but are ongoing in the Chemical & Additives Storage Building, Laboratory, Administration building and Workshop.

HVAC works are ongoing in the Laboratory and Administration building.

July	Progress over August	August
	<p>PP/U&amp;O: Electrical substation. Panel installation completed. Panel testing ongoing. Cable tray erection and cable pulling ongoing</p>	
	<p>PP/U&amp;O: Common Control Room. Panel and cable installation ongoing</p>	



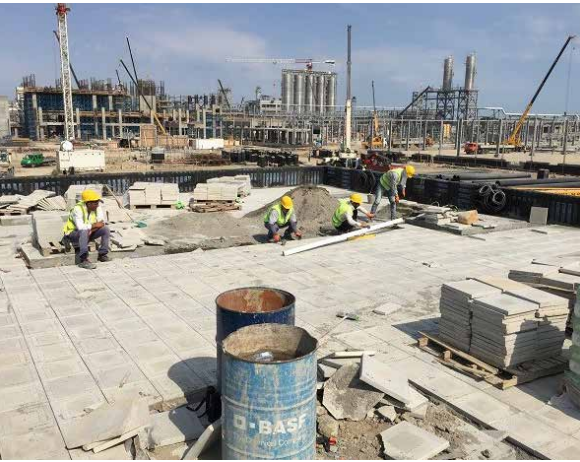
July

Progress over August

August



PP/U&O:  
 Laboratory.  
 Finishing and  
 HVAC works  
 ongoing



PP/U&O:  
 Administration  
 building.  
 Roof  
 waterproofing  
 completed.  
 Interior  
 finishing and  
 HVAC works  
 ongoing



PP/U&O:  
 Workshop.  
 Interior  
 finishing works  
 ongoing.  
 Workshop  
 crane  
 installation  
 completed



PP/U&O:  
 Bagging &  
 Packing Building.  
 SS (column)  
 installation  
 ongoing





July

Progress over  
August

August



PP/U&O: Fire  
water Retention  
Basins and  
Pump House.  
Pump and pipe  
installation  
ongoing. Pump  
and generator  
alignment  
started



PP/U&O: Air/  
HP Nitrogen  
Condensate  
Compressor  
Station Storage  
& Pumping.  
Equipment and  
pump alignment  
ongoing.  
Installation  
of electrical  
instrumentation  
started



PP/U&O: Valve  
house.  
Valve and pipe  
installation  
ongoing. Façade  
painting ongoing



PP/U&O:  
Cooling Tower.  
Sprinklers'  
installation  
completed.  
Pump, pipe  
and equipment  
installation  
ongoing. Cable  
tray installation  
ongoing







PP/U&O: Flare Knock Out Drum.

Pipe connection completed. Pipe testing started



PP/U&O: Side Stream Filter Package.

Pipe installation ongoing



PP/U&O: Gate/Guard House.

Internal finishing works completed



PP/U&O: PP-Wet section / Polymerization.

Equipment installation and alignment ongoing. Installation of electrical instrumentation started





July

Progress over  
August

August



PP/U&O: PP  
Dry Section  
/ Extrusion  
building.  
Equipment  
installation  
and alignment  
ongoing



PP/U&O: PP  
Dry section /  
Powder Silo.  
Equipment  
installation  
and alignment  
ongoing



PP/U&O:  
Homogenization  
/ Blender Silo.  
Pump, pipe  
and equipment  
alignment  
ongoing.  
Instrumentation  
installation  
ongoing







PP/U&O: Raw Water Storage Tank.  
Pipe installation ongoing



PP/U&O: DM Water Storage Tank.  
Tank painting completed.  
Thermal insulation works completed



PP/U&O: Isobutane Sphere.  
Dike wall welding ongoing. Pipe installation ongoing







PP/U&O:  
Hexene  
Storage Tank.  
Tank erection  
ongoing.  
Piping works  
started



PP/U&O:  
Impounding  
Basin for  
Isobutane.  
Pump  
installation  
completed.  
Piping works  
started



PP/U&O:  
Interconnecting  
Pipe Racks.  
Pipe erection  
ongoing. Cable  
pulling ongoing







PP/U&O: Pipe Sleepers.

Pipe erection and cable tray installation ongoing. Cable pulling ongoing





**Warehouse.**

Truss installation ongoing. Installation of ventilation deflectors started. Heavy duty paving completed. Roof and wall (sandwich panels) installation started



**Roads.**

Internal roads' construction ongoing. First layer of asphalt laid







Nitrogen package.

Equipment, pipe and steel structure installation works ongoing





# A valuable partner supporting industrial development projects



**ГАЗПРОМБАНК**  
Открытое акционерное общество

The Gazprombank Group, <http://www.gazprombank.ru>, is a highly-diversified uniquely structured business entity, offering a full spectrum of banking services nation-wide, and incorporating companies in a range of industries, including financial, media, petrochemical, and industrial engineering.

In June 2015 the Gazprombank Group and SOCAR signed an Agreement for a non-recourse loan of US\$ 489 mln to be extended by the GPB Group to cover 60 % of the SOCAR Polymer project's cost estimate. As of the end of August, 83% of the loan amount has been expended, with the overall progress in the construction of the PP and HDPE plants having reached the 91% and 71% marks respectively.

GPB's involvement in the petrochemical projects implemented in Azerbaijan further expanded as - together with ING and China Development Bank - it undertook the role of a financial advisor in the SOCAR GPC project, supporting this venture during the equity negotiations with Chinese partners. The GPB team also provides support in preparing and working on the financial model, reviewing terms sheets, shareholder agreement, etc.

Gazprombank has also assumed a big role in the Russian "Yamal LNG" project which has a total budget of about USD\$27 billion. GPB has extended a loan in the amount of USD\$1 billion to support the project. The main investors in the "Yamal LNG" are the China National Petroleum Corporation (CNPC), the Silk Road Fund, the Export-Import Bank of China and the China Development Bank. This gives GPB valuable experience in cooperating with Chinese investors, which is an asset that can be effectively applied in the GPC project.



# First Motor Solo Run activity performed



On 23 August 2017, our Project pre-commissioning and commissioning team safely and successfully performed the first Motor Solo Run activity in the PP/U&O section.

A Motor Solo Run is an important part of pre-commissioning activities as it is performed to enable early detection of any problems in motors' operation to provide time for remedial action. The Motor Solo Run is the 1st operation to permit the start-up of any rotating equipment such as pumps, compressors, etc. Performance of such tests represents one of the main indicators for the progress of the entire project.

The construction sub-contractor, EPC contractor and PMC/SOCAR Polymer teams engaged operators and specialised technicians to ensure the correct development of the motor solo run test. The construction sub-contractor performed the preliminary checks that covered civil, electrical and mechanical works, as well as rotation checks, which then were followed by the electric motor solo run test, with the results recorded in appropriate certification forms which shall be used for every motor solo run test to be carried out on the electric motors of the plant henceforth.

The first Motor Solo Run for the PP plant yielded positive results, with all the measured parameters within the acceptance range, thus, signifying reaching of an important milestone in the start-up process of the plant. It was the result of efficient cooperation between the construction and pre-commissioning teams of the SOCAR Polymer, Fluor, KT-Kinetics Technology and USTAY companies.





# Control room screens now live



On August 20-23, a training for SOCAR Polymer's operation and maintenance personnel was conducted on site by a representative of the YOKOGAWA company with the support of the KT-Kinetics Technology and Tecnimont companies.

The operations team members were trained in and practiced checking instrument devices installed at the plant, as well as explored the DCS system, with emphasis on how to monitor, by-pass and check the readings of each individual instrument.

The operations computer screens in the Common Control Room went live!





# Interns' bus-tour round the SOCAR Polymer construction site



On August 29 and 31 the interns divided into two groups visited the SOCAR Polymer construction site and were taken on a bus tour for visual familiarization with the production facilities under construction. At the time, the overall construction progress of the PP and HDPE plants constituted approximately 91% and 71%, respectively.

The HSE supervisor, Seymur Guliyev reiterated the main safety rules and cautions to the group, informing that the interns are in no case allowed to leave the bus on this tour. The route was planned in a way to show the group the main plant areas and units to the greatest extent possible in the circumstances of construction under way and safety ensured.

As the bus made short stops by the major components of the plants, such as the polymerization area, loop reactors, powder silos, extrusion area, blending silos, bagging area and warehouse, the CSA Engineer Oskar Humbatov acting as the "tour guide" informed the inquisitive interns about the observed units and installations and answered the questions. The bus tour was followed with a Q&A session at SOCAR Polymer's site office. The interns demonstrated live interest in the structure, functional properties and capacity of the plants, the workflow, manning scheme, trainings conducted for the plant staff, as well as inquired about the end product parameters and even about some sales and marketing details. Upon request, the work principles of some large equipment items, the functions of the valve house, loop reactor, nitrogen generation package and silos were described to them.

The interns enjoyed and appreciated this activity as an opportunity to get a closer look at the SOCAR Polymer production facility.





# Overseas OPS Trainings



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

and are delivered at manufacturers' facilities abroad or at appropriate institutions in Azerbaijan.

During the month of August, SOCAR Polymer employees attended the following trainings:

	Reactor Pumps training	Radiation Safety training
<b>Company/Location</b>	Flowserve USA Inc. Mexico city, MEXICO	National Nuclear Research Centre JSC Baku, AZERBAIJAN
<b>Duration</b>	1 week	2 days
<b>Dates</b>	8-15 August 2017	24-25 August 2017
<b>Participants' positions</b>	4 shift supervisors, 2 plant operators and 1 mechanical technician	1 HSE advisor and 1 instrument technician
<b>Participants' names</b>	Mushvig Bagirov Ilyas Muradov Mahmud Huseynov Elvin Aslanli Nariman Akbarov Natig Abbaszade Elmeddin Kazimov	Rashad Ibrahimov Farid Mikiyev



# Radiation Safety training



## Rashad Ibrahimov - HSE Advisor



“Proper maintenance of required records” and “Emergency procedures”.

To me the most difficult topic of this training program was Radioactive Decay. When a radionuclide decays, a transmutation occurs. The decay product becomes an atom of a new element with chemical properties different from the original “parent” atom. With each transmutation, an emission from the nucleus occurs. There are several modes of decay associated with each emission of alpha, beta, gamma, or neutron particles.

The most interesting topic of this training was, in my opinion, Occupational Radiation Exposure Risk. The existence of potential for harm is real. It can be minimized if the policies and procedures are carefully followed. Accepting the potential risks of working with ionizing radiation is a personal matter. Each individual must weigh all benefits against the potential risks. Upon accepting the risks, one must respect radiation, and work safely with and around it.

The purpose of the “Radiation safety” training was to provide a minimum required level of knowledge for the staff who will be handling radionuclides or operating equipment that produces ionizing radiation, as well as to provide sufficient information so that they are able to identify and deal effectively with the radiation hazards in their immediate work area, thus providing for both their own safety, the safety of those around, and the protection of the environment.

The “Radiation safety” training was run by the National Nuclear Research Center CJSC established in Baku in 2014, considering the necessity of ensuring the use of nuclear technologies for peaceful purposes, improving financial and technical resources of the nuclear technologies sector, increasing highly-qualified human resources and expanding nuclear researches in the country.

The training lasted 2 full days. The lectures of the first day were complemented with practical exercises on the second. The topics presented by a qualified and knowledgeable trainer included “Safe use of laboratory equipment and materials, including protective clothing”, “Experiment procedures and protocols, including operating procedures for radiation producing machines”, “Safe handling, storage, and disposal of radioactive materials”, “Methods to control and measure radiation levels and contamination”,



# Reactor Pumps training



**Left to right:** Elmaddin Kazimov, Cris Grige, Natig Abbaszadeh, Nariman Akbarov, Elvin Aslanli

## Elmaddin Kazimov - Plant shift supervisor

The training that we were attending was provided to both the operational and maintenance teams with view to prevent any reactor-pump-related problems that might arise in the future. The company running the training was Flowserve, a well-known US company with representative offices and production facilities in many countries, including Russia, Ukraine and Uzbekistan. Flowserve has gained worldwide reputation as a manufacturer of pumps, valves and other equipment. Flowserve's largest production area is located in Mexico. It occupies a large area outside the city, with a high-tech infrastructure based on the latest technologies. In all areas computerized digital control equipment (CNC) is installed. We very much liked their well-organized facility, with a proper selection of equipment, and safety rules strictly followed.

The trainings lasting from 9:00 am till 4:00 pm were held both in a classroom and in the field. The pumps' operating mechanism, the problems that might arise during work,

and ways to eliminate mechanical issues were disclosed. Owing to our genuine interest in the covered topics, the training that stood out with its rich content was accompanied with dynamic Q&A sessions and heated discussions. The latest technology applied in the training increased our interest and engagement in the learning process. Most of the time we were involved in practical exercises at the plant. We visually witnessed the pumps' assembly, mechanical coupling and replacement processes. During the practice hours visual observation of what we had learned in classroom hours, as well as our hands-on involvement in the production process at the plant broadened the scope of obtained information and was the most positive side to the training. It was very important for us to visually observe the operations on axial pumps. At the same time, it was a great experience for us to see the clearly-phased production process of such pumps. Our physical participation in the assembling of a new pump largely improved our understanding of the

process. Our trainers were Jason Allare and Robert Hollins, who were invited to Mexico for the training from the central office in the United States. Both of them were highly knowledgeable in terms of experience and expertise. They were very responsive to the technical questions we asked, and did not hide their surprise at how informed we were about the topic to come up with such questions.

We shall be able to apply the knowledge and skills gained at this training when our plants launch production. These pumps bring the substances in reactors into motion and are some of the most important pieces of equipment at the Plant. Knowing that any malfunction of the pumps may seriously affect the production process increases our sense of responsibility.

We share the knowledge acquired in the training with our colleagues. We passed to them all the training materials provided to us, and made a presentation about what we had learned. Every day we develop further as a team, and it is the result of our company's support to staff training.



# SOCAR Polymer in the soccer field



In mid-2014, a number of SOCAR Polymer employees who appreciate both the soccer game and a healthy lifestyle, formed two 6-player teams and started playing soccer in leisure time. The members of those first soccer teams were representatives of different professions, such as Gulu Nabiyeu from the logistics and supply department, Fuad Talishinski from the legal department, Khalid Gasimov from the HSE department, Bahruz Hajiyev from the construction department, Shohret Mikayilov, Hamid Adigozalov and Vugar Muradov from the transportation department, Babek Beydullayev from the finance department, Seymur Mursalov from the administration department, Elvin Rzayev and Mushfig Hajiyev from the audit department, and Orkhan Hasanov from the engineering department.

As the number of enrolling players increased, games were played twice a week regularly and shortly after the amateur soccer club of the SOCAR Polymer company was created. Games were scheduled for 20:00-21:00 on Tuesdays and for 10:00 on Saturday mornings, using stadiums available for rent in different parts of the city.

As the soccer club member grew in number, it was decided to hold an internal mini championship with the participation of 4 teams consisting of the company's Baku office employees. The championship schedule was drawn out and the games were played throughout the winter season of 2015.

Two soccer teams comprising SOCAR Polymer's most





devoted soccer fans currently assemble twice a week for a 2-hour game and physical exercise. With view to avoid injuries, the games are preceded with warming exercises. To ensure proper judging of the game process, referees of the Azerbaijan Soccer Federation Association (AFFA) are invited. The SOCAR Polymer company gives its soccer club both encouragement and administrative support. In spring of 2017, the players were supplied with T-shirts marked with the SOCAR Polymer logo. A professional soccer ball and other individual supplies have also been provided. Due to the vacations taken in summer months, the club members aren't very active attending the regular games and training hours, but starting in September the soccer club schedule grows busy again.

The club's youngest player is 20-year-old Kamil Sadigov who despite of his young age is a capable player both as a frontman, a defender and a goalkeeper. The eldest of the club members, Vugar Muradov is one of the best players. Among the best strikers are Samir Javadov, Tariyel Bagishov, Shahin Dadashov, Shohret Mikayilov and Ruslan Huseynov. According to opinions voiced about Tariyel Bagishov, he is capable of striking a goal from any position once the ball is passed to him. Defence is well secured by Orkhan Samadov, Tural Mustafayev and Kamal Ibrahimli. The best midfield players are Gulu Nabiye, Mushfig Hajiyev and Famil Mammadov.

The club's plans include arrangement of large field games with the soccer teams of the SOCAR Marketing and SOCAR Russia companies. For this purpose, a select team of 9 players will be created to represent SOCAR Polymer. It is also planned to join in different amateur soccer championships. In the past, our teams have played with the teams of the Baku Business Group company and Baku Oil Refinery

Modernisation Project – sometimes winning, sometimes losing in final scores. The main needs of the club are met, with uniforms, stadium rent and medical insurance provided. The players try not to play harshly, but just in any sports grounds injuries are common and ankle twists are most frequent. Meanwhile, such leisure time activities and sport exercises both have a very good effect on our employees' health, keeping them fit and strong, and boost the team spirit, strengthening friendly relations among the employees.







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