

## Kat Plant:

Kat is one the most outstanding companies of oil industry. It is the first Iraqi company licensed in **November,12th, 2008** from General Directory for Industrial Development/ Iraqi Ministry of Industry and Minerals for producing oiling oils and paving asphalt; for the company is provided by fuel oils refined from space distillation of crude oil by General Oil Company of Kirkuk ( Beiji and Kirkuk Refineries) according to the license from Iraqi Ministry of Industry and Minerals. Designing energy of the first unit at the present time is more than **500 tons per day**. The second unit's energy is more than **1500 tons per day** of producing oiling oil and asphalt according to the special Iraqi Standard (ISO) of asphalt.

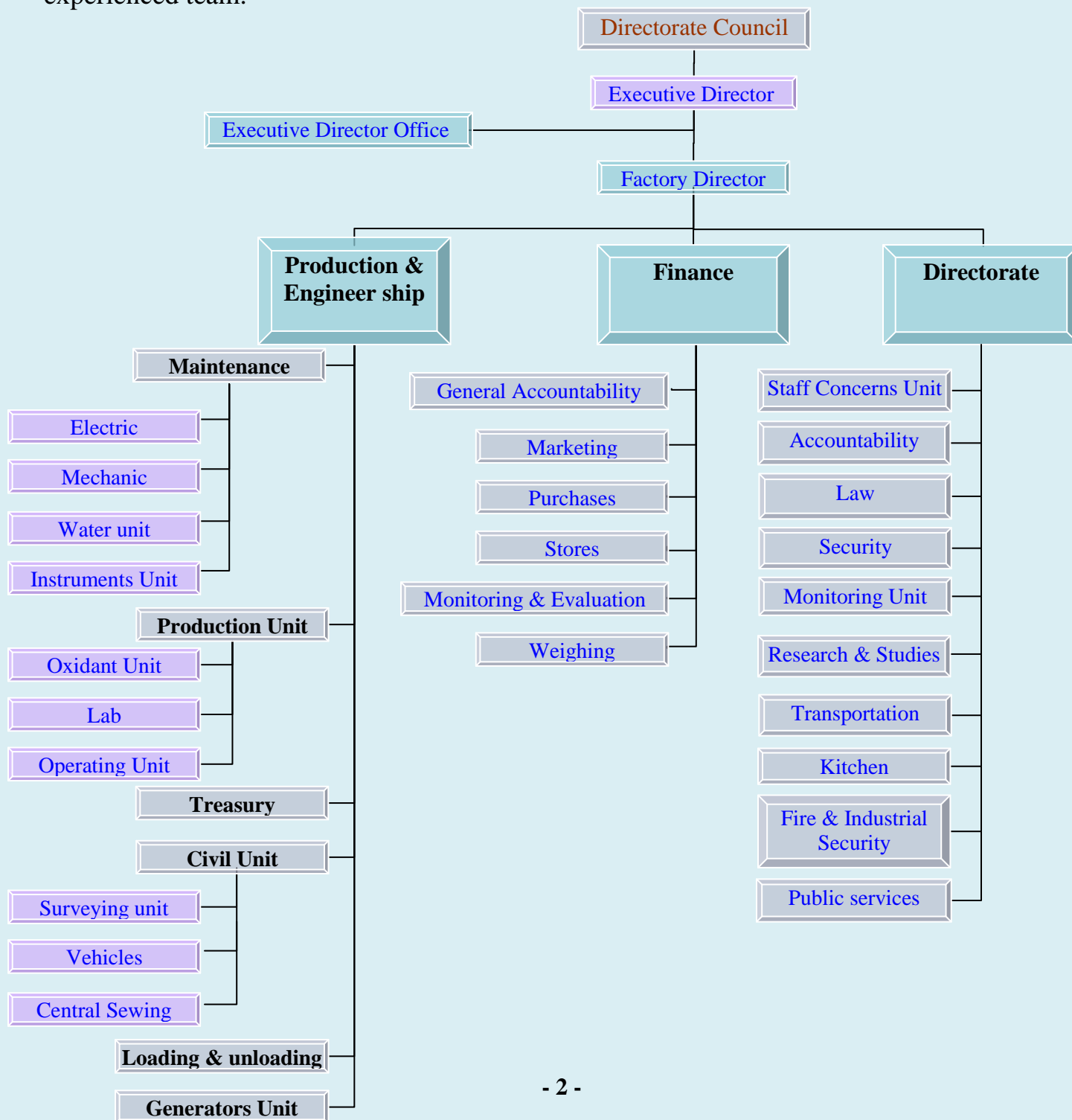
This factory is regarded as the first project among the other general projects of oil products that are produced in this complex regarding light lubricants, heavy lubricants, and heavy gas oil. Hereby below the diagram of Kat complex.



\*Some of Kat Plant pictures

## The Administrative Structure Scheme of Kat Factory:

Kat company for producing asphalt is consists below complete divisions and run by an experienced team:-





## Management:

Kat has a multi- branch completed management to run various steps of production in the complex which consists units of:-

- 1- Computer
- 2- Accountability & Purchases
- 3- Employees' Concerns
- 4- . . . etc



\*Some of the administration and office pictures



INDUSTRIAL  
EQUIPMENT  
& SUPPLIES  
SPECIALISTS

## Civil Engineering: □

Kat has a complete civil division of specialized engineering staff of civil operations and surveying engineering.



\*Some of civil and surveying engineers' office

## Laboratory: □

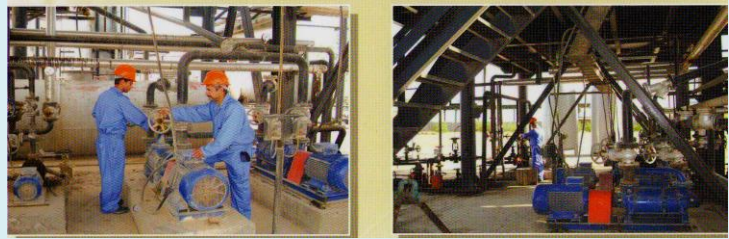
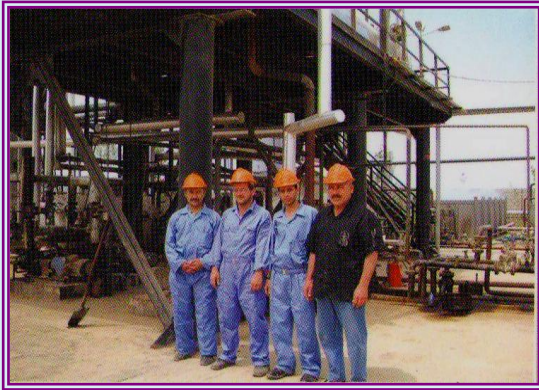
Kat has a complete technical laboratory which contains of modern instruments to deal with and compute qualifications of the products under supervision of experienced qualified experts.



\*Some of Lab. pictures

## Production:

Being the most important division in producing asphalt and ISO lubricants, production unit consists of (operation, oxidant, and lab), thus this unit had been supplied with the most modern producing elements of international origins. These elements are run and operated by oil industries specialized experts and engineers to be the peak in producing asphalt and



\*Part of the electrical and mechanics engineers pictures

## Influence on Environment: □

The complex has no serious impact on environment in province of Kirkuk and around, defiantly that belongs to the priority and importance given to that essential point.

Kat has got a unit called (burning unit) within oxidant division where out going steams from oxidant towers are burnt .

For sake of keeping environment clean lands around the complex had been changed into green areas, trees and flowers are already cover the area





## Products and Services: □

### 1- Asphalt:

The first step in manufacturing asphalt is space distillation of the crude oil and obtaining materials that possess useful qualifications in producing asphalt from reduced crude oil . soon after that space distillation under pressure under which oil distilled and asphalt produced and space distillation materials that regarded as nourishing row material for asphalt producing asphalt is produced.

### Oxidant Asphalt Qualifications-:

#### Product: Asphalt

Quality weight: Asphalt qualifications after oxidation.

Shining degree: 295- 310

#### 1- Penetration Degree-:

Asphalt with various Penetration Degree can be produced as required (40 – 50) (60 – 70) (85-100)

#### 2- Ductility Degree -:

Asphalt has very great capability of ductility most the time to more than 150cm .

#### 3- Softening Degree-:

Under specific circumstances asphalt has softening ability.

Oxidant asphalt is very resistant under climate and high pressure circumstances and has below qualifications:

1. Low Penetration
2. High Softening Point
3. Temp Ductile Low

Type Requirements		Test Way	Result	Test
First Type	Second Type			
70 - 60	50 - 40	ASTMD5	40-50	cm (1/10) Penetration
230 <	240 <	ASTMD92	290-305	Lightening Point
58 - 48	62 - 51	ASTMD36	48-62	Softening
100 <	100 <	ASTMD113	100-150	Ductile cm
99 <	99 <		99 <	% Solving in Triethelene



## 2- Lubricants:

Lubricants industry is regarded as world's top strategic industries because of wide uses that these oils are used especially in various industrial activities such as power generating stations and most of the fields where motors and engines are operated.

Lubricants acquire more and more importance by passing the time because of the continuous technological progress especially in fields of designing motors and engines so as to fulfill their performance and raise the ability in working under rigid circumstances of over-loading, high temperature, and pressure.

Therefore, Lubricants products have to convey these technological needs so as to be able to respond to the latest requirements of designing motors and engines in various important sectors.

Physical and chemical qualifications of oils vary according to the purposes they used for . in other words it is the purposes behind using oils are the way that leading to happen changes in qualifications of physical and chemical qualifications of oils themselves.

### Types of Oils:

Product: **Heavy Gas Oil**  
Typical Weight: 0.810 – 0.850  
Lighting Degree: 60 - 80

Product: **Light Lubricant**  
Typical Weight: 0.860-0.890  
Lighting Degree: 120-170  
Viscosity: 5 c.st. (in 100 c°)

Product: **Heavy Lubricant**  
Typical Weight: 0.890 – 0.940  
Lighting Degree: 190- 220  
Viscosity: 21 c.st. (in 100 c°)





## Quantities and Daily production:

The first unit consumes more than **17 ton/hour** from fuel oil for producing sum of **6.73 ton/hour** of asphalt. For heavy lubricant the factory needs **3.96 ton/hour** and light lubricant **4.84 ton/hour**. Also for Gas Oil **1.32 ton/hour**. The complex designated to work all day continuously for 300 days a year.

The Second unit consumes more than **63 ton/hour** of fuel oil for producing more than **20.9 ton/hour** of asphalt, **11.88ton/hour** of heavy lubricant, **14.52 ton/hour** of light lubricant, and **3.96 ton/hour** of heavy gas oil. Moreover, the oxidant unit and stores of the second unit.

The complex is able to work with various sums of energy until **2000 ton/ day** to produce materials according to used type of fuel oil in the process of space distillation as below :

1. Heavy Gas Oil ~ 15%
2. Light Lubricants ~ 36%
3. Heavy Lubricants ~ 6%
4. Asphalt ~ 43%



\*Some of product units' pictures



## Civilian Works Achieved in the Factory: □

Establishing a single floor producing complex on 200 sqm, and a double floor administration complex on 660 sqm .

- Organizing the basic location of the project and building sewage services for, rain water, and oily water.
  - Building three concrete basins with volume of 3.6 million liters of capacity and seven iron basins of 8.6 million liters for storing raw materials, producing materials, and water keeping .
  - Building restaurant and residential complex for single employees on 800 sqm.
  - Establishing buildings for control, laboratories, electricity, and instrument materials with affixes on 250 Building restaurant and residential complex for single employees on 800 sqm.
- All modern lab requirements for this purpose had been provided:- Local road web had been achieved vehicle parking area for both small and big lorries performed , gardens ,tree-planting, and fencing the whole project got conducted with length of 2.4 km. and 2.6 meters in height had been achieved. Meanwhile gates and reception are also been built .
- A mosque had been built on 150 sqm.
  - A complete electronic balance station for weighing cargos electronically.
  - Building stores and maintenance workshops on 300sqm.
  - Under construction, Building for fire extinguishing including pumps , hose lines, and mixers for mixing chemical materials with water. All that for fighting fires resulted from hydrocarbon materials.



\*Some of Storage tanks & mosque & product & Lab. & Stores & restaurant buildings pictures

**Licenses and certificates: 1**

**بسم الله الرحمن الرحيم**

Rep. of Iraq  
Ministry of Oil  
North Refineries Co.

العدد / التاريخ  
١٦٦٢ / ٢٠١٠ / ٨

جمهورية العراق  
وزارة النفط  
شركة مصافي الشمال (ش.ع.)  
هيئة التفتيش والمراقبة  
قسم البحوث والسيطرة النوعية

إلى/مصنع كات لإنتاج الإسفلت وزيت التزيت

م/فحص مواد

إشارة إلى كتابكم المرقم ١٢٢ في ٢٧/٧/٢٠١٠ .  
تم فحص الماد صحبة كتابكم أعلاه وكانت النتائج كمايلي :-  
مع ... التقدير

No	TESTS	Light Lub oil	Heavy Lub oil	Asphalt		
				40 - 50	60 - 70	100 - 110
1.	KIN VISCOSITY @ 100 C° CST	4.55	13.89	—	—	—
2.	KIN VISCOSITY @ 40 C° CST	25.58	266.70	—	—	—
3.	VISCOSITY INDEX	85	—	—	—	—
4.	POUR POINT C°	+ 27	+ 27	—	—	—
5.	FLASH POINT C°	188	234	—	—	—
6.	COLOUR ASTM D - 1500	6.5	Dark	—	—	—
7.	WATER CONTENT VOL %	Nil	Nil	—	—	—
8.	TAN Mg KOH/g	0.05	2.85	—	—	—
9.	ASH CONTENT WT %	0.045	9.0	—	—	—
10.	COPER STRIP CORROSION	1 a	1 b	—	—	—
11.	Specific Gravity @ 15.6 C°	—	—	1.0324	1.0294	1.02734
12.	KIN VISCOSITY @ 135 C° CST	—	—	660.63	514.01	335.83
13.	Penetration(100gm,5sec,0.1mm)	—	—	40	55	81
14.	Softening Point (R&B) C°	—	—	46	47	45
15.	Ductility @ 25 C°(Cm)(min)	—	—	100 +	100 +	100 +
16.	Flash Point C°(min)	—	—	326	324	310

د.علي محمد العبيدي  
المدير العام  
رئيس مجلس الإدارة

صورة مئة الى //  
\* القسم المالي لاستيفاء مبلغ قدرة (٤٣٨,٠٠٠) أربع مائه وثمانية وثلاثين ألف دينار لاغيرها.  
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## Licenses and certificates: 2

**بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ**

Rep. of Iraq  
Ministry of Oil  
North Refineries Co.

العدد / ١٠٦٥  
التاريخ / ٢٠١٠ / ٨ / ٥



جمهورية العراق  
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إلى/مصنع كات لإنتاج الإسفلت وزيت التزيت

م/فحص نماذج إسفلت

إشارة إلى كتابكم المرقم ١٤٣ في ٢٠١٠/٨/٥ .  
تم فحص نماذج الإسفلت صحبة كتابكم أعلاه وكانت النتائج كمايلي :-  
.. مع التقدير ...

No	TESTS	Asphalt		
		Sample 1	Sample 2	Sample 3
1-	Specific Gravity @ 15.6 C°	1.0414	1.0342	1.0310
2-	KIN VISCOSITY @ 135 C° CST	538.88	444.6	335.3
3-	Penetration(100gm,5sec,0.1mm)	48	60	93
4-	Softening Point (R&B) C°	47	46	43
5-	Ductility @ 25 C° (Cm)(min)	100 +	100 +	100 +
6-	Flash Point C° (min)	324	324	308

\* النماذج مطابقة للمواصفات التسويقية العراقية عدا وجود حيود في فحص درجة اللونية .



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**ناظم نصار عتيزان**  
وكيل المدير العام

صورة مئة الى //  
\* القسم المالي لاستيفاء مبلغ قدرة (١٦٢,٠٠٠) مانه واثنان وستون ألف دينار لاغيرها.  
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## Licenses and certificates: 3

