



# Saudi Aramco: Overview & Interaction with the Valve Industry

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Energy Energy Tyto World World  
Energy Innovation Performance Partnership Reliability  
Energy Innovation Performance Partnership Reliability

Saudi Aramco  
Overview

# Presentation Outline

## Part 1

- **Quick Overview - A look from 33,000 feet**

## Part 2

- **Mega projects & development plans**

## Part 3

- **Usage patterns and valve standards**

## Part 4

- **Doing business with Saudi Aramco**

# SAUDI ARAMCO OVERVIEW



... a fully integrated, global energy provider

Exploration

Production

Transportation



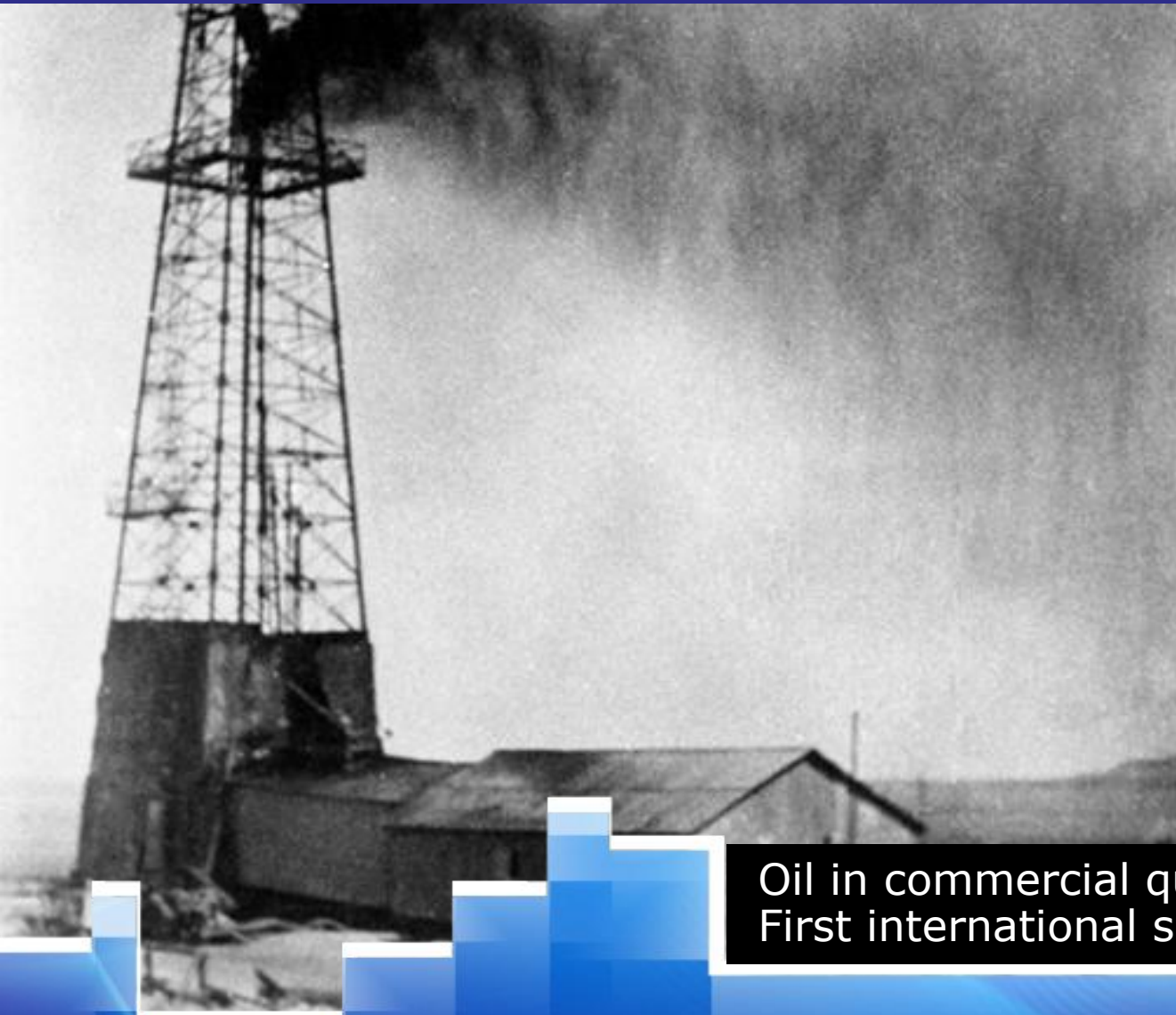
Completed its first 75+ years as a reliable supplier of energy.

# Broad statistics

- **World's largest producer of crude oil**
- **World's largest producer and exporter of LPG**
- **Manages the world's largest proven conventional crude oil reserves (259.7 billion barrels)**
- **Manages the world's 4<sup>th</sup> largest gas reserves (282.6 trillion SCF)**



# The start of reliable supplies



Oil in commercial quantities found: 1938.  
First international shipment: 1939.



# The National Oil Company of Saudi Arabia



Saudi Arabia purchases Aramco 1973-1980.  
Saudi Aramco established: 1988.

# Production - 2011

On any given day in 2011, Saudi Aramco produced:

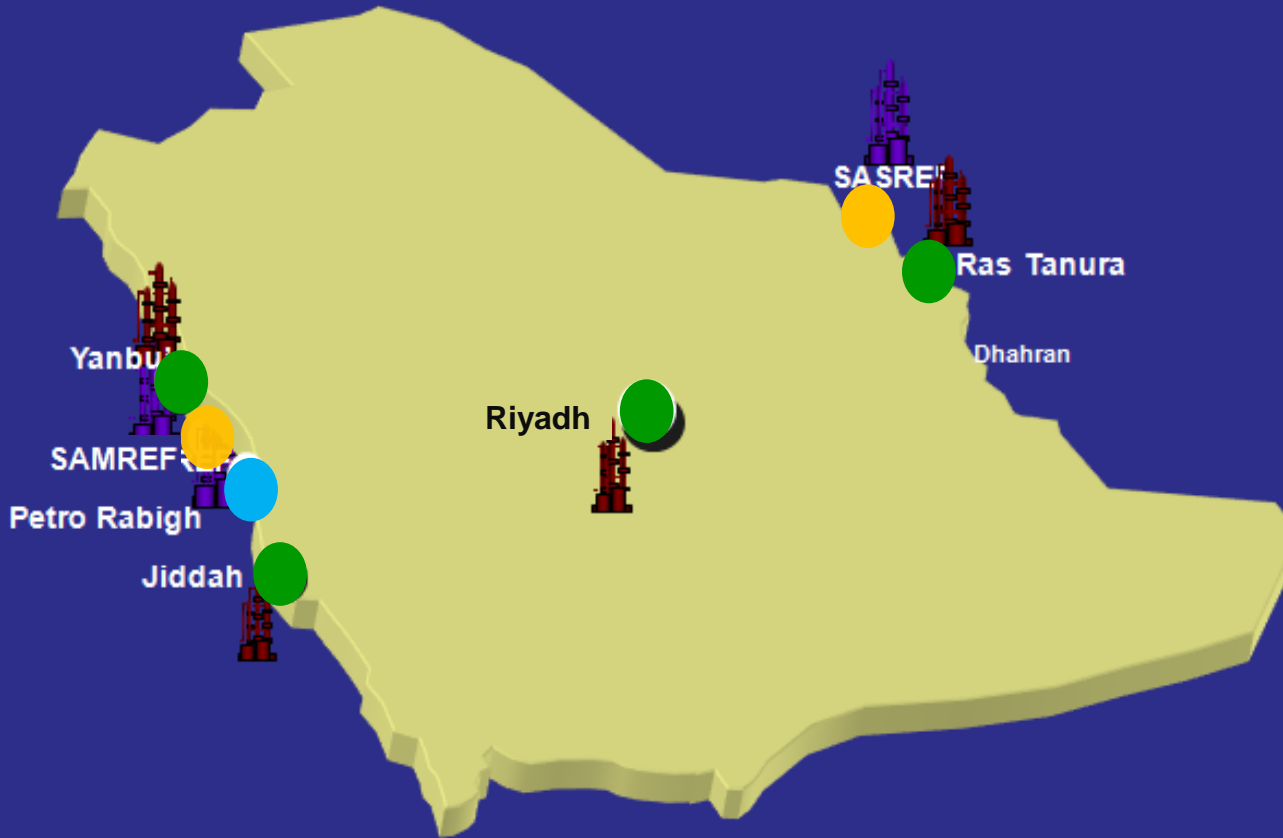
- 9.1 million barrels of oil
- 9.9 billion standard cubic feet of natural gas

Total capacity = 12.5 million bpd  
Pipelines network = 12,000 miles





# A domestic refiner



-  Saudi Aramco Refinery
-  Joint Venture Refinery
-  Equity Ownership



Domestic refining capacity:  
More than 2 million barrels per day.

# A global refiner



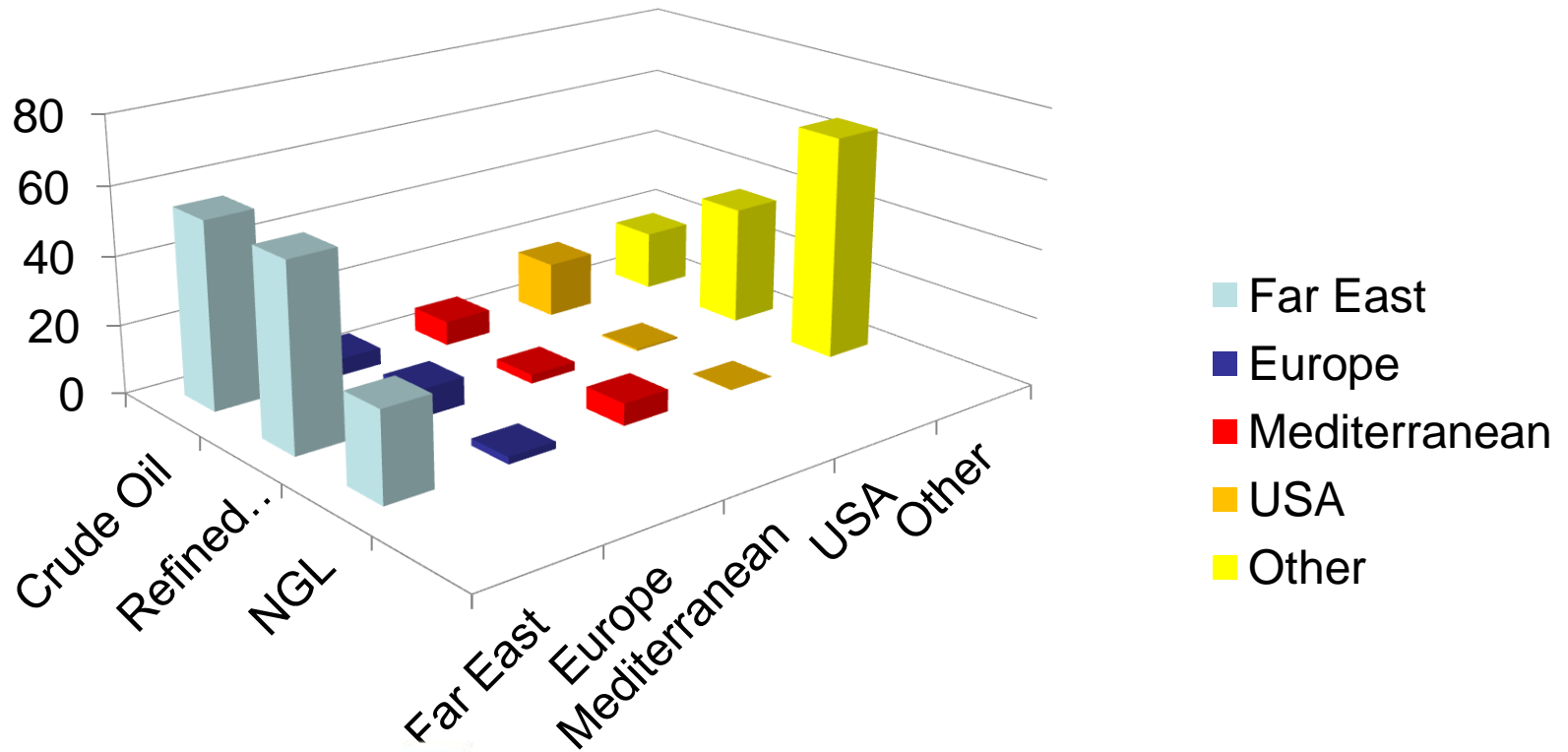
Total refining capacity: More than 4 million barrels per day.

# Moving into petrochemicals.....



Completion of Petro-Rabigh Phase I

# 2011 Exports By Region



# MEGA PROJECTS



# SATORP (Refinery) (2009–2013)



**400 MBD deep conversion**

**Arabian heavy crude oil**

**JV with Total at Jubail**

**Fuels/benzene/PX/propylene**

# YASREF (Refinery) (2010–2014)



**400 MBD deep conversion**

**Arabian Heavy crude oil**

**JV with SINOPEC**

**Fuels & Benzene**

# JIZAN (Refinery & Terminal) (2012–2016)



**Arabian Heavy & Medium crude**

**Marine Terminal for VLCC's**

**400 MBD refining capacity**

**2,400 MW Power Plant**



# Petrochemicals

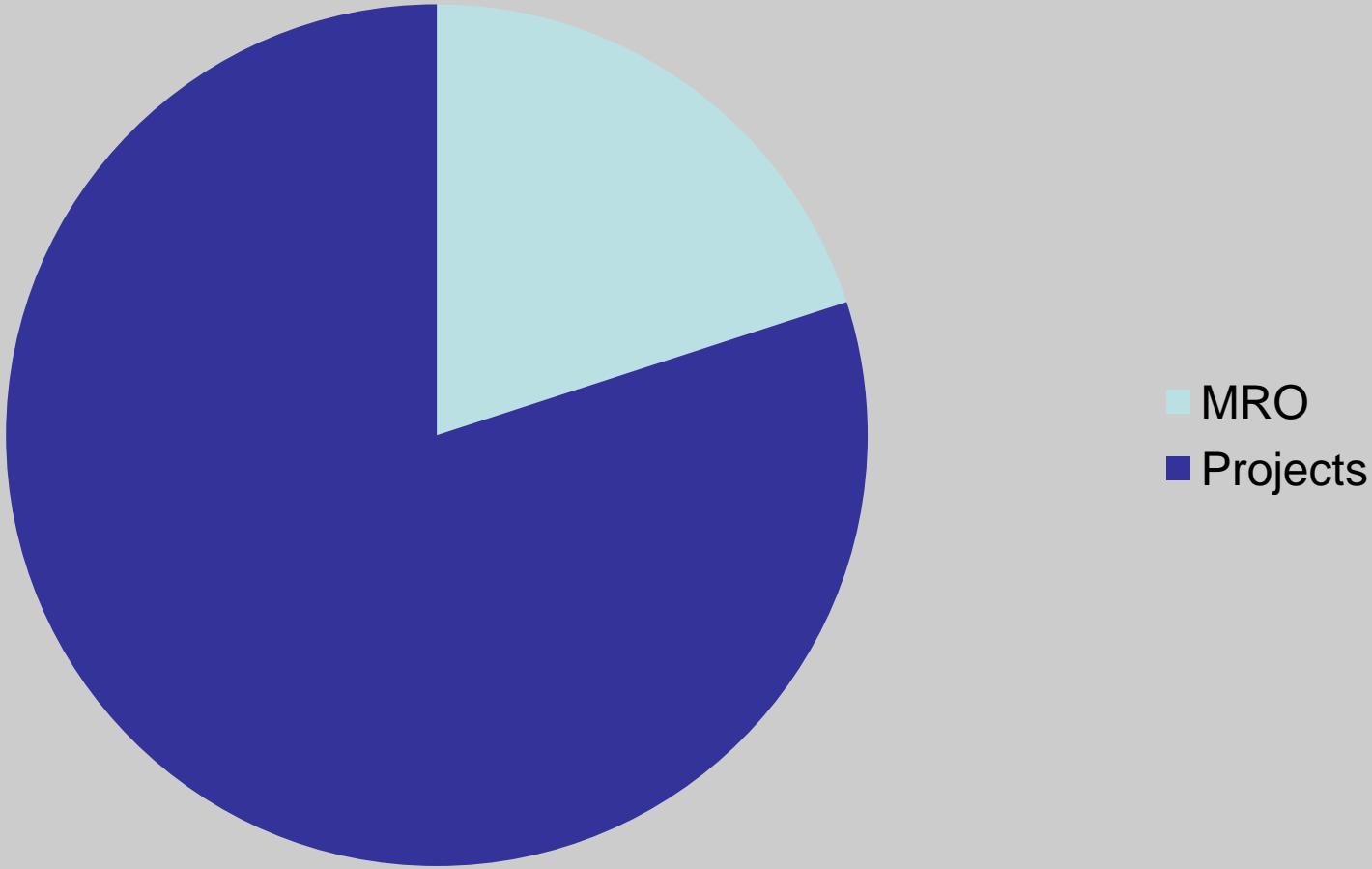
- **SADARA CHEMICAL COMPANY - Saudi Aramco – Dow Petrochemicals project in Jubail**
- **Petro-Rabigh Phase II (JV with Sumitomo)**



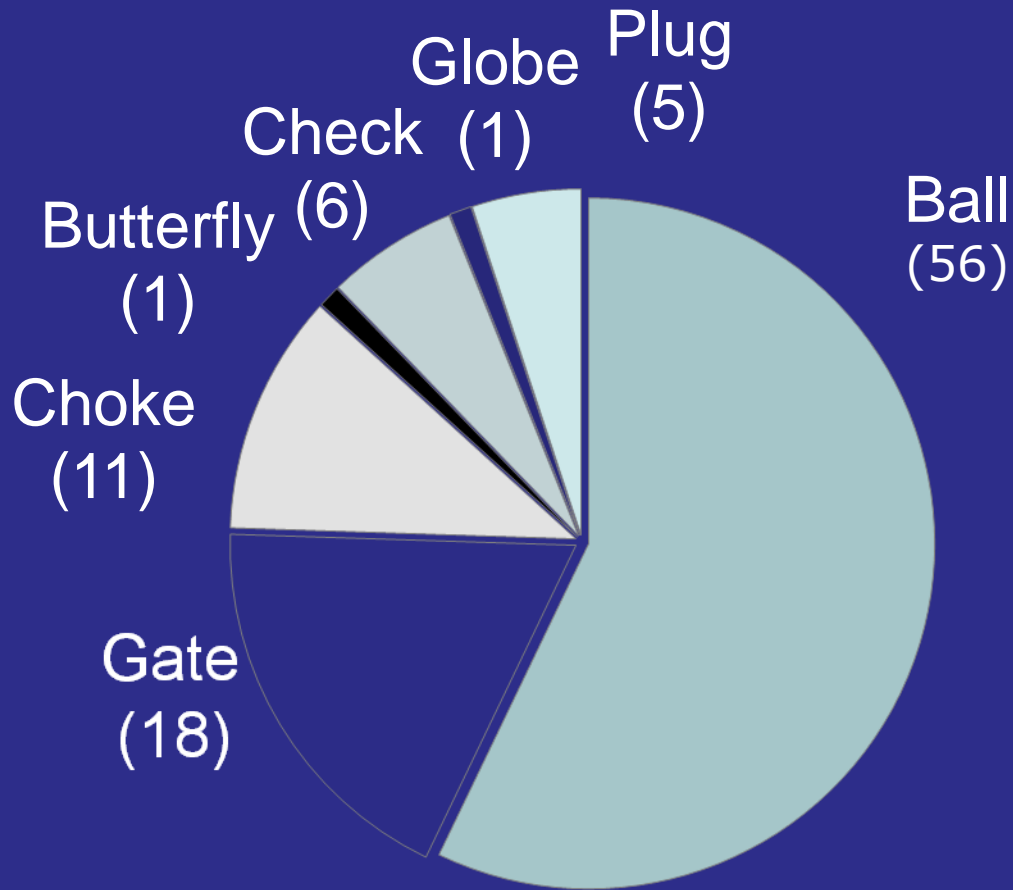
# VALVE ISSUES



# Purchases by purpose



# Valve type usage (% of spend)



# Valve Material Specifications

<b><u>04-SAMSS-, Valve Type</u></b>	<b><u>API STANDARD referenced</u></b>
<b>-001, Gate</b>	API 600
<b>-002, Globe</b>	API 600
<b>-005, Check</b>	API, BS
<b>-047, Butterfly</b>	API 609
<b>-049, 10K test &amp; inspection</b>	API 6A
<b>-050, Thru-conduit gate</b>	API 6D
<b>-051, API 6D Ball</b>	API 6D
<b>-052, API 6A Ball</b>	API 6A
<b>-053, Plug</b>	API 599
<b>-054, Choke</b>	None

# Valve Reliability Study Results

## DEFECT RATIO PER PROJECT

PROJECT	TOTAL TESTED	DEFECTIVE	OVERALL DEFECT RATIO
<b>Khursaniyah</b>	<b>63,415</b>	<b>2,098</b>	<b>3.3%</b>
<b>Khurais</b>	<b>9,090</b>	<b>319</b>	<b>3.5%</b>
<b>Nuayyim</b>	<b>860</b>	<b>47</b>	<b>5.4%</b>
<b>Shaybah</b>	<b>2,545</b>	<b>266</b>	<b>10.4%</b>
<b>TOTAL</b>	<b>75,910</b>	<b>2,730</b>	<b>3.6 %</b>

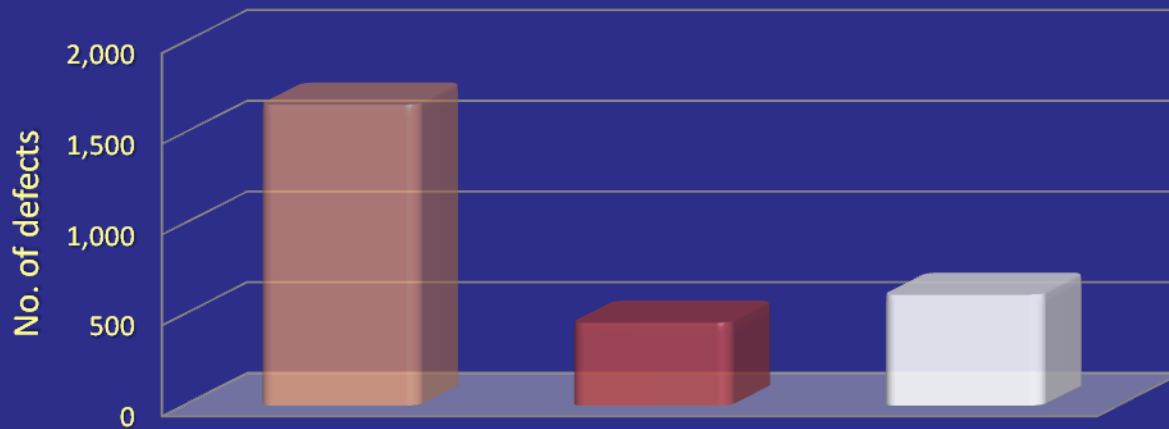


# Location of defects

**1,660 valves**  
**60%**

**458 valves**  
**17%**

**612 valves**  
**23%**



**Defect types**

**SEAT**

**BODY**


**OTHERS**

# Sample manufacturer results

SIZE NPS	TOTAL QTY TESTED	DEFECTIVE QTY	DEFECTIVE RATE PER SIZE
ALL	10224	873	8.54%
2	6649	648	9.74%
4	718	14	1.94%
6	601	24	3.99%
8	308	15	4.87%
10	215	30	13.90%
12	180	17	9.40%
14	38	4	10.50%
16	72	9	12.50%
18	31	2	6.45%
20	36	1	2.70%
24	21	1	4.90%



## Resulting actions

- **Re-assessment of certain valve manufacturers**
  - **Packing and storage instructions updated**
  - **Increased casting quality requirements**
  - **Increased pressure testing requirements**
  - **Contractor site procedures updated**
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# DOING BUSINESS WITH SAUDI ARAMCO



# ASC Sourcing Regions

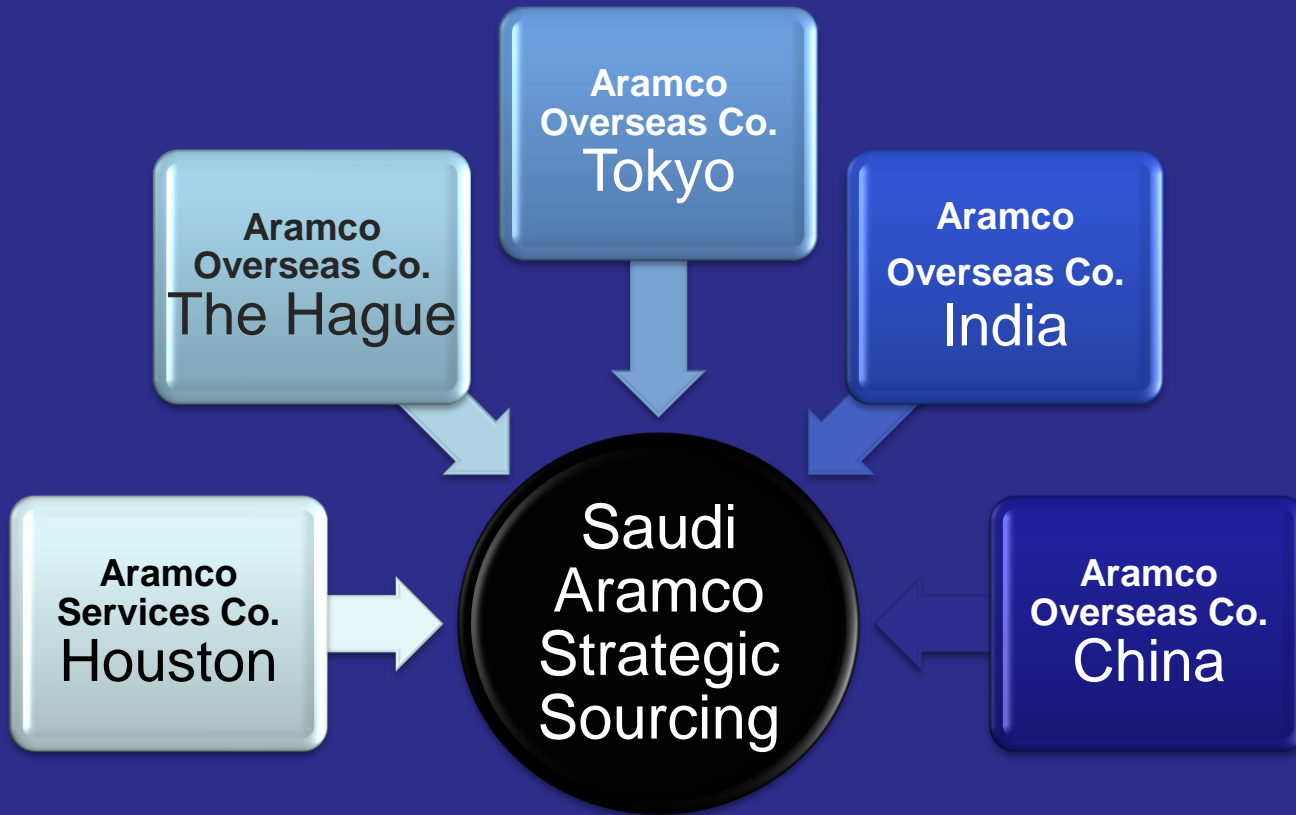
- North America
    - Canada
    - USA
  - South America
    - Argentina
    - Brazil
    - Trinidad-Tobago
    - Columbia
  - Central America
    - Mexico
- 
- A decorative graphic at the bottom of the slide consists of several vertical blue bars of varying heights, some with white outlines, set against a dark blue background with light blue horizontal streaks.

## ASC Strategic Sourcing Unit - Role

**To utilize best practices to identify and select suppliers within North and South America for long-term partnerships that will add value to SAUDI ARAMCO.**



# Strategic Sourcing Offices



## How do I become registered?

1. There has to be a need for the material that you offer (A list of priority products required can be found at:  
[www.ascstrategicsourcing.com](http://www.ascstrategicsourcing.com) )
2. A special request (Ad Hoc) has been created for your material
3. A Purchase Requisition(PR) has been created with no approved source to fulfill the PR

# Registration Process

## Complete Vendor Registration Package

### Document

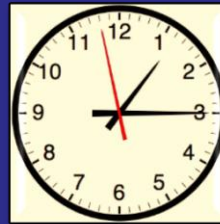
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec non diam in nisi vestibulum egestas. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Nulla facilis. Praesent ornare nulla, nec nisi. Curabitur magna nisi, tempus sed

Vendor Package

- ASC 5254
- PT 202
- Copy of Quality Manual
- Copy of Certifications
- Technical Documents
- Compliance Letter to Saudi Aramco Specification (if applicable)

## Pre-Screening

1. Strategic Sourcing
2. Engineering



Time

- One Week for Strategic Sourcing
- One Week for Engineering

# Registration process

Send Package to  
Strategic Sourcing in  
Saudi Arabia for Review



Time

- One Week for Strategic Sourcing at Saudi Aramco

Generate workflow  
for CSD (Consulting  
Services  
Department)  
approval



# Evaluation Request Workflow

**CSD  
approves  
evaluation  
request**

**Technical &  
Quality  
Screening**

**On- site  
Technical &  
Quality  
Evaluation**

**Evaluation  
report is  
prepared**

**CSD  
provides  
final output**

# The evaluation process

## Two distinct evaluations - Technical and Quality

- Technical Evaluations - Product oriented  
Conducted by CSD and/or delegate (ASC Engineering)
- Quality Evaluation – Quality oriented  
Conducted by ASC Inspection



# The technical evaluation process

## Technical Evaluation elements :

- Conformance to Industry and Aramco specification requirements
- Customer references
- Review of field or laboratory testing data
- Capabilities and resources




## WORLD RANKINGS

- ❑ Number 4 for “fiscal freedom”
- ❑ Number 7 for “most rewarding”
- ❑ Number 7 for “freest labor market”
- ❑ Number 23 for “size of economy”
- ❑ One of the world’s fastest growing economies




## Local Manufacturing Facility - Assistance

For a proposed project, Saudi Aramco will :

- ✓ Provide consumption assessment for a specific product/service
  - ✓ Assist in developing a preliminary commercial assessment
  - ✓ Assist in acquiring technical capabilities
  - ✓ Provide advise on meeting technical requirements
  - ✓ Provide continuous support after start up
- 

# Local Manufacturing Facility - Assistance

## Selected incentives & benefits

- ✓ Financial assistance
  - ✓ Preferential treatment by Saudi Aramco and Government
  - ✓ Can own 100%
  - ✓ Maximum income tax rate is 20%
  - ✓ Repatriate 95% of profits and capital
- 

**THANK YOU**

