



# WORLD LEADER IN CATALYST HANDLING

HYDROPAC® DENSE LOADER for Fixed-bed Reactors  
UNIPAC™ & UNIPAC™ 2.0(GeCCO-LOADER®) for Reformer Tubes

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# Introduction

HPA is a diversified and integrated service provider with an unparalleled reputation for handling all types of reactors in the oil, gas and petrochemical industry throughout not only in Asia Pacific but also in South America, Europe, Middle East and Africa. Our in-depth local knowledge of operating conditions and the candid ability to develop strong relationships with all local and government bodies ensures your best interests are maintained at all times.



Your one-stop-shop for  
**SAFE and EFFICIENT**  
reactor turnarounds



# OUR HISTORY

HPA (S) PTE LTD, formerly a reactor maintenance division of VAC-TECH ENGINEERING PTE LTD, built a reputation for completing major Hydrocracker and RDS unit turnarounds faster and safer than previous contractors. Due to that success, HPA (S) PTE LTD was invited, by Chevron, to unload and dense load a reactor in Texas. This particular reactor had never run at full capacity with increased catalyst attrition due to mal-distribution.



HPA (S) PTE LTD, better known in the industry as HPA, teamed up with a local US catalyst handling company, and together they successfully completed turnaround and reactor runs to better than expected output. Many of these runs still hold superior today. As a result of these impressive runs, word began to travel amongst US catalyst turnaround groups as HPA's superior services became the talk of the industry. These groups were so impressed that an article was published in Hydrocarbon Engineering Magazine highlighting HPA's capabilities. This set the stage for HPA to enter the US market on its own under the business name of HYDROPROCESSING ASSOCIATES, LLC.



**HPA has a long history in catalyst handling and dense loading technology having worked closely with ChevronTexaco in various locations around the globe, including the United States, Argentina and also in Asia.**

HPA is actively expanding it's business under HYDROPROCESSING ASSOCIATES INTERNATIONAL PTE LTD headquartered in Singapore with subsidiaries in Germany, Brazil and Malaysia. The objective is to be the onshore & offshore catalyst handling services provider of choice. As one of the market leaders in dense loading technologies, HPA is continuously investing in research & development to stay up-to-date to the latest process reaction requirement.

# OUR PEOPLE

## Meet the HPA Executive Team



**PETER W. THEW**  
CEO



**SAM HO**  
VICE PRESIDENT



**RIZAL SALIM**  
MANAGING DIRECTOR

## HPA INTERNATIONAL PTE. LTD.



# OUR *FACILITIES*



**HPA Germany Office**



**HPA Brazil Office**



**HPA Malaysia Office**



**HPA Singapore Office**

# WHY CHOOSE US?

## »» Our Safety

Safety is our number one priority, and we are committed to an “incident free work environment”. Through our proactive Safety Program, potential hazards are identified, evaluated, and effectively controlled or eliminated to prevent incidents and related consequences. All catalyst technicians are trained in:

- Confined Space Entry - normal & inert atmosphere
- Confined Space Rescue
- Emergency Response First Aid & CPR

## »» Our Quality

HPA uses state-of-the-art equipment cameras, communication systems, and software programs to ensure optimum results without compromising safety. We pride ourselves on numerous accreditations:

- ISO 9001:2015 Quality MS
- ISO 14001:2015 Environment MS
- ISO 45001:2018 Occupational Health & Safety MS
- bizSafe Certified

## »» Our Technology

The HYDROPAC® allows the sprinkling of catalyst in a continually uniform and homogenous pattern at a rate slow enough to let each particle settle but fast enough for acceptable loading time. Using the HYDROPAC®, you will be assured of:

- An Optimum Load - More Catalyst Loaded Per Bed
- An Even Distribution of Flow
- Prevention of Channeling and less chance for hotspots
- Catalyst Pellets Lying Flat thereby Optimizing Reaction
- No Need for a Technician to Walk Over the Catalyst During Loading

The UNIPAC™/UNIPAC™ 2.0 (GeCCo-Loader®) is a simple and fast loading technique that consistently delivers catalyst distribution uniformity inside reformer tubes. Using the UNIPAC™/UNIPAC™ 2.0, you will be assured of:

- Fast reformer catalyst loading rate
- Homogeneous pressure drop across the reformer
- Higher uniform density of catalyst loaded
- Less temperature variation
- No need for catalyst pre-socking before loading

# OUR SERVICES



## Project Management

**Utilizing the latest in project management software, we can plan your turnaround from shutdown to startup. With our experienced planners at HPA, we are able to schedule resources and plan detailed tasks for on-time delivery every time.**

**Planning Includes:**

- Consulting Prior to, During and upon Startup
- Review and Analyse the Scope & Budget
- Organize Material including inspection of the Catalyst
- Inspection of Reactor/Vessel Internal Parts
- Torquing and Bolt Tensioning: Opening and Closing the Reactor
- Mechanical Work: Including known repairs as well as repairs necessary after inspections
- QA/QC Inspections
- Catalyst Handling: Unloading, Dense Loading and/or Sock Loading
- Video Inspection & Confined Space activity monitoring



## Blinds to Blinds

**Let HPA manage all the tasks and resources required during your turnaround. We can ensure safety, quality, efficiency, on time and within budget. Blind to Blind Includes:**

- Blinding & Opening the Reactor/Vessel
- Unloading of the Catalyst
- Video Inspection & QA/QC Inspection
- Reactor/Vessel Repairs & Retrofits
- Loading of the Reactor/Vessel: Dense and/or Sock Loading
- De-Blinding including Torquing and Bolt Tensioning





## Reactor/Vessel Unloading

### Vacuuming and Dumping of Catalyst (Including Inert Entry)

With industry leading experience and expertise HPA has built its reputation by utilizing the safest methods for unloading vessels based on their design, type and location. We service a variety of reactor/vessel types utilizing a combination of methods depending on the reactor/vessels' specs.

HPA utilizes a variety of proven methods including wet dumping and dry vacuuming as well as fresh air and inert atmospheres. We are equipped to handle every method available on the market. Our wet dumping techniques, with consideration not only to the safety of personnel involved but also to the environment, is by far the quickest in the industry.

### Catalyst Screening

The vibration screeners we use have low attrition and good cut points giving a clean reusable material that requires no additional handling afterwards. We can screen into any approved catalyst container from drums, 1-ton big bags and 2-m<sup>3</sup> catalyst bins. Our screening units are easily adjusted to give the optimum-screening rate for the required cut point.



# Reactor/Vessel Loading (including Inert Entry)

## Sock Loading

With conventional sock loading techniques and experienced personnel, a uniform loaded bed can be achieved where the higher densities and startup  $\Delta P$  of the superior method of dense loading is not practical. Good sock loading techniques can minimize problems that are normally associated with sock loading.

## Dense Loading

Dense loading is by far the best loading method available in the industry, and with this particular method, the unit can handle the higher startup  $\Delta P$ . The advantages of dense loading is well known and well documented.

- HYDROPAC<sup>®</sup> technology is a HPA designed, owned and operated dense loading system that incorporates all of the required features for a uniform load with none of the disadvantages associated with many of its competitors.
- UNIPAC<sup>™</sup>/UNIPAC<sup>™</sup> 2.0 (GeCCo-Loader<sup>®</sup>) loading technology is the most advanced method offering uniform and homogeneous catalyst loading of reformer tubes.





**We emphasize Quality, Safety, Customer Care and Innovation in our work.**



## Offshore Catalyst Handling

Offshore facilities need to be efficient, reliable and most importantly - SAFE. This presents real issues for CPP owners and FPSO operators facing greater challenges. Addressing these complex and interrelated issues means constantly looking for smarter, more cost-effective ways to operate and maintain their facilities without compromising quality and safety.

HPA supports owners and operators of offshore facilities worldwide with our advanced offshore catalyst handling services comprising highly trained personnel and our equipment are design-specific for offshore operations in compliance to the safety standards.



## CATALYST HANDLING SPECIALIST

*Your one-stop-shop for SAFE and EFFICIENT reactor turnarounds.  
We have made it our goal to create a name for ourselves that is  
synonymous with Quality, Safety, Customer Care, and Innovation!*

### **HPAS - HPA (S) Pte. Ltd.**

#### **HPAI - Hydroprocessing Associates International Pte. Ltd.**

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### **HPAM - HPA (M) Sdn Bhd**

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### **HPAG - Hydroprocessing Associates GmbH**

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