

## About Us

**INSANIA ENERGI** serve you to increase your performance as well as to create a long term relationship with you to help you stay ahead at the competition. To do so, we provide a variety of structured consultancy programmers in combination with implementation skills in all relevant areas.

We see our key strengths not only in the development of innovative technologies, which help improve product quality and performance but also in provide service as supervision unloading, loading, start-up process, troubleshooting, evaluate performance and our commitment to close customer relationships. With sales offices two branch in java area, **INSANIA ENERGI** can meet market requirements for speciality chemical and equipment wherever that market may be. Therefore we are very appreciate your interest in our product and look forward to serving your needs.

# AIR SEPARATOR PLANT

**Provide Solution  
For Your Business**



In order to meet your needs, INSANIA ENERGY will be support all of chemical and equipment needs requirements in your plant, especially in air separation plants. In addition, to improve performance of the unit system, we also offer air separation process using **cryogenic and Pressure Swing Adsorption (PSA)** technology according to require your capacity.



We offer optimal solutions tailored to the needs of customers. For the manufacture of oxygen, nitrogen and argon, we design, build and supply worldwide:

- Prefabricated **skid-mounted plants** (modular design) have many ADVANTAGES, e.g. SIMPLE MAINTENANCE AND SERVICE
- **containerized** plants can be used in any climate zone. They are transportable, i.e. via air transport, and can be used in a mobile manner due to their closed construction and short dismounting time
- **Custom-made products**, e.g. stationary plants, which we construct and bring into operation directly on the construction site

## BENEFIT

- Low investment and operating costs through optimized processes and highest technical reliability
- Prefabricated plants or plant sections for short commissioning times
- Selection of suppliers with good reputation and state-of-the-art technologies
- In-depth training for operating personnel
- High quality manufacturing in our own workshop
- Certified production to international standards (API, GOST, ASME, DIN)



# CRYOGENIC AIR SEPARATION

Cryogenic air separation plants are particularly suitable for the production of liquid and/or gaseous oxygen (O<sub>2</sub>), nitrogen (N<sub>2</sub>) and argon (Ar). Air separation is based on the cryogenic rectification process, in which the air is cooled down to -195°C and partially liquefied. During rectification, the individual air components are separated due to their different boiling points. The end products are gases / liquids in the highest purity and can be used for numerous applications, e.g. industrial and medical.



**CRYOGENIC AIR SEPARATION**

INSANIA ENERGI in improving services especially for Air Separation Process (ASP) has cooperation with the German EPC company to meet your needs in developing business in gases industrial. The company is CRYOTEC Anlagenbau GmbH, which is situated in Wurzen, Saxony. The company was established in 1995 as a successor company of the MAFA Wurzen. Since 2009 it is a part of the EPC Group. Cryotec offer you comprehensive services from maintenance and servicing of plants, the sale of wear and spare parts, extensive remote maintenance work, right up to the modernization of existing plants and the relocation (dismantling) of plants as well as on-site training courses at the customer's site after commissioning.

## PRESSURE SWING ADSORPTION



# PSA SYSTEM

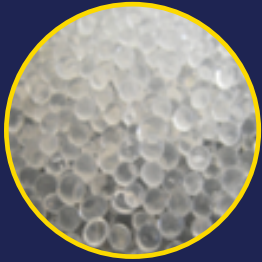
Industrial nitrogen and oxygen gas can be produced by either separation of gaseous air using adsorption (PSA) or fractional distillation of liquefied air using cryogenic methods. Nitrogen generators and Oxygen generators extract the available nitrogen/oxygen in the ambient air from the other gases by applying the Pressure Swing Adsorption (PSA) technology. The first step in the PSA process is compressed air passing through a combination of filters and an activated carbon tower with the purpose of removing dust, entrained oil and water. The purified air is then directed to one of two adsorption vessels that are packed with carbon molecular sieves (CMS). The remaining impurities such as carbon dioxide and residual moisture are adsorbed by the CMS at the entrance of the adsorbent bed.

In this matter INSANIA ENERGI Indonesia have working partner with Slovenia company that is OMEGA AIR. OMEGA AIR d.o.o. Ljubljana is a privately owned, technology driven company, established in 1988 and located in Ljubljana, capital of Slovenia. As a specialist for gas filtration and treatment they are present all over the World. Their products are installed in a wide range of general industry, electronics, food and beverage, chemical, petrochemical, plastics, pharmaceutical, medical, and automotive industry applications.



# OUR CHEMICAL SUPPPORT

## SYLOBEAD® Silica Gel



Silica gel is a porous, amorphous form of silica ( $\text{SiO}_2$ ). Although it has the same chemical composition as sand, silica gel is radically different from other  $\text{SiO}_2$ -based materials, due to its unique internal structure. Unlike zeolites, silica gels have larger pores with a wide range of diameters – typically between 5 Å and 300 Å – and do not allow for the separation of molecules by size alone.

## Rest-O-Cat® inert alumina balls



MTE has developed the Rest-O-Cat® 99 high alumina balls, when due to chemical composition, temperature resistance or mechanical strength the standard high silica content spheres are not suitable. The standard MTE specification can be used in most of these applications and provides the same benefits as the standard silica types.

## SYLOBEAD® Molecular Sieves



Zeolite molecular sieves are crystalline, highly porous materials, which belong to the class of aluminosilicates. This structure is formed by tetrahedras of ( $\text{AlO}_4$ ) and ( $\text{SiO}_4$ ). SYLOBEAD® MS S 624 is a highly porous, binderless crystalline aluminosilicate in beaded form. The pore openings in the crystals have a diameter of approximately 5 Å.

## ADSORBENT SORBEO CMS-F

(Carbon Molecular Sieve)



Sorbeo CMS-F is pelletized form carbon molecular sieve. Sorbeo CMS-F is mainly used to separate  $\text{N}_2$  from air but is can also be used in many other applications (separating methane from methane/ $\text{CO}_2$  mixture or ethylene from ethylene mixture gasses).

## ADSORBENT SORBEO AC

(Adsorption - Purification)



Activated carbon packages can purify compressed air and gases by means of an adsorptive process and is often used for separating oil vapors from compressed air flows. Sorbeo AC is a high efficient pellet-shaped adsorbent offering low abrasion. It provides a high density and high activity (iodine number) - both fundamental characteristics of a high quality activated carbon. Furthermore, a low ash and low water content results in a maximum amount of effective carbonaceous material.

## Ceramic Ball



Ceramic ball has good applications for precision bearings dan bearing tracks. The hardness of ceramic ball can reduce the coefficient of friction, thereby maximizing the among of energy converted to work. Ceramic ball often used for catalyst bed support layer. It has component  $\text{Al}_2\text{O}_3$  and  $\text{SiO}_2$  with different ceramic size.



# INSANIA GROUP



**TOTAL PETROKEM**  
INDONESIA



**INSANIA**  
**AIR SOLUTION**



**PETROSORB**  
INDONESIA

**INSANIA**  
**ENERGI**



In Collaboration with



**OMEGA**

**AIR**

[www.insaniaenergi.com](http://www.insaniaenergi.com)

[www.insaniagrup.com](http://www.insaniagrup.com)

# Let's grow your business with us

## Headquarter:

Wisma Bhakti Mulya Building  
4th floor, Suite 602 Jl. Kramat  
Raya no. 160 Jakarta Pusat  
Phone: +62 21 391 8486 |  
Fax: +62 21 391 8487

## Engineering Office:

Ruko Evergreen MERR  
Boulevard  
Jl. Raya Pandugo Penjaringan  
Sari No. 25B  
Phone: +62 31 871 6090

 [insania.energi@insaniagrup.com](mailto:insania.energi@insaniagrup.com)

 +62 85 8888 51080