



Jiangsu Yangzi Catalyst Co., Ltd.

江苏扬子催化剂有限公司

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产 品 手 册

Product Manual

江苏扬子催化剂有限公司

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贵金属催化剂

Precious Metal Catalyst

GRS-10 重整催化剂

GRS-10 Reforming Catalyst

GRS-14 选择性加氢催化剂

GRS-14 Selective Hydrogenation Catalyst

GRS-16 重整开工制氢催化剂

GRS-16 Hydrogen Production Catalyst

FR-10/FR-20 半再生重整催化剂

FR-10/FR-20 Semi-Regeneration

Platforming Catalyst

CZ-100 连续重整催化剂

CZ-100 Continuous regeneration

Platforming Catalyst

YG-05 碳四异构化催化剂

YG-05 C4 Isomerization Catalyst

YG-10 低温烷烃异构化催化剂

YG-10 Low Temperature Light Paraffin

Isomerization Catalyst



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烷烃脱氢催化剂

Paraffin Dehydrogenation Catalyst

LHB-01 丁烷脱氢连续再生催化剂

LHB-01 Butane Dehydrogenation Catalyst

LHB-02 丙烷脱氢连续再生催化剂

LHB-02 Propane Dehydrogenation Catalyst

DH-31 固定床丁烷脱氢催化剂

DH-31 Fixed Bed Isobutane

Dehydrogenation Catalyst



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环保催化剂

Environmental Catalyst

DSZ-01-10 型氧化锌脱硫剂

DSZ-01-10 ZnO Sulfur Removal Adsorbent

DS10-100 脱硫剂

DS10-100 Sulfur Removal Adsorbent

GTAS-41 脱砷剂

GTAS-41 Arsenic Removal Adsorbent

DCL-01-10 脱氯剂

DCL-01-10 Chloride Removal Adsorbent

低温脱硝催化剂（无钒）

Low Temperature Nitro Compound Removal
Adsorbent (Vanad-free)



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加氢催化剂

Hydrogenation Catalyst



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GHT-21 加氢精制催化剂

GHT-21 Hydrofining Catalyst

产品特点: GHT-21 是以改性 γ -Al₂O₃ 为载体, 以钨镍及助剂为活性组份, 采用先进制备方法生产的新一代加氢精制催化剂。具有以下特点:

- 较低堆密度
- 金属含量低, 组元匹配合理
- 适宜的酸性功能
- 活性稳定性好, 特别是烯烃饱和性能好
- 再生性能好

Product features: GHT-21 is a new generation of hydrofining catalyst produced by advanced preparation method with modified γ -Al₂O₃ as the carrier, tungsten, nickel and additives as the active components. It has the following characteristics:

- Low Bulk Density
- Low metal content and scientific component composited
- Suitable acid function
- Good activity stability, especially good olefin saturation
- Good regeneration performance

产品理化性质

Product Physical-Chemical Properties

牌 号 Brand	GHT-21
外形 Appearance	兰灰色三叶草形 Grey-Blue Clover
规格 mm Spec. Particle Size	Φ1.6×3-8
孔容, ml/g Pore Volume	0.50-0.60
比表面积, m ² /g Relative Surface Area	≥180
堆密度, g/ml Bulk Density	≥0.74
耐压强度, N/cm Crush Strength	≥ 180
NiO, m%	≥2.4
WO ₃ , m%	≥12.0
助剂, % additives	---

应用范围: 适用于低压下直馏石脑油、焦化汽油、催化汽油、裂解汽油等汽油馏分原料加氢, 脱除原料中硫、氮及烯烃饱和, 并可以再生使用。GHT-21 催化剂具有优异的烯烃加氢饱和功能, 同时具有一定



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的脱硫脱氮功能，其可单独使用，如采用 GHT-21/GHT-22 二段装填工艺，可使烯烃饱和、脱硫、脱氮达到最佳反应效果。

Application: GHT-21 is suitable for hydrogenation of naphtha, coking gasoline, catalytic gasoline, cracked gasoline and other gasoline distillate raw materials under low pressure, to remove sulfur, nitrogen and olefin saturation in raw materials, and can be reused. GHT-21 catalyst has excellent olefin hydrogenation saturation function, and has a certain desulfurization and denitrification function, which can be used alone. Such as the use of GHT-21/GHT-22 two-stage loading process, can make olefin saturation, desulfurization, denitrification to achieve the best reaction effect

产品包装: 专用铁桶包装，内套双层塑料袋，净重 140Kg/桶

Packing Spec.: special iron drum packing, inner double plastic bag, net weight 140Kg/ drum

储存、使用注意事项:

Precautions for storage and use:

- 注意防水、防潮，防止其它化学品污染
- 搬运时不得摔、滚铁桶，装填时避免催化剂高空坠落
- 开工、再生时应严格按 GHT 系列催化剂使用说明操作，必要时应在专业技术人员指导下进行
- Pay attention to waterproof, moisture-proof, to prevent other chemical pollution
- Do not dropping or rolling the steel drums during handling, and avoid catalyst falling from high altitude during loading
- Start up, regeneration should be strictly in accordance with the GHT series catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



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GHT-22 馏分油加氢精制催化剂

GHT-22 Catalyst for hydrofining distillate

产品特点: GHT-22 是以改性 γ - Al_2O_3 为载体, 以钨镍及助剂为活性组份, 采用先进制备方法生产的新一代加氢精制催化剂。具有以下特点:

- 较低堆密度, 强度高
- 金属组元匹配合理
- 适宜的酸性功能
- 活性稳定性好, 特别是脱氮及脱硫性能好
- 再生性能好

Product features: GHT-22 is a new generation of hydrofining catalyst produced by advanced preparation method with modified γ - Al_2O_3 as the carrier, tungsten nickel and additives as the active components. It has the following characteristics:

- Low density, high strength
- Metal components are properly matched
- Suitable acid function
- Good activity stability, especially good nitrogen removal and desulfurization performance
- Good regeneration performance

产品理化性质

Physical and chemical Properties

牌号 Brand	GHT-22
外形 Appearance	三叶草形 Clover
规格, mm Size Specification	$\Phi 1.6 \times 3-8$
比表面积, m^2/g Relative Surface Area	≥ 180
孔容, ml/g Pore Volume	0.50-0.60
堆密度, g/ml Bulk Density	≥ 0.78
耐压强度, N/cm Crush Strength	≥ 180
NiO , $\text{m}\%$	≥ 2.0
WO_3 , $\text{m}\%$	≥ 14.5

应用范围: 适用于低压高空速条件下直馏石脑油、焦化汽油、催化汽油、裂解汽油等汽油馏分原料加氢, 脱除原料中硫、氮及烯烃饱和, 并可以再生使用。GHT-22 催化剂具有优异的脱硫脱氮功能, 同时



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具有一定的烯烃加氢饱和功能，其可单独使用，如采用 GHT-21/GHT-22 二段装填工艺，可使烯烃饱和、脱硫、脱氮达到最佳反应效果

Application: GHT-22 is suitable for hydrogenation of gasoline distillate raw materials such as straight-run naphtha, coking gasoline, catalytic gasoline and cracked gasoline under low pressure and high space speed, and can remove sulfur, nitrogen and olefin saturation in raw materials, and can be reused. GHT-22 catalyst has excellent desulfurization and nitrogen removal function, and has a certain olefin hydrogenation saturation function, which can be used alone, such as the use of GHT-21/GHT-22 two-stage loading process, can make olefin saturation, desulfurization, nitrogen removal to achieve the best reaction effect.

产品包装: 专用铁桶包装，内套双层塑料袋，净重 130Kg/桶

Packing spec.: special iron drum packing, inner double plastic bag, net weight 130Kg/ drum

储存、使用注意事项:

- 注意防水、防潮，防止其它化学品污染。
- 搬运时不得摔、滚铁桶，装填时避免催化剂高空坠落。
- 开工、再生时应严格按 GHT 系列催化剂使用说明操作，必要时应在专业技术人员指导下进行。

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, to prevent other chemical pollution.
- Do not drop or roll iron drums during handling, and avoid catalyst falling from high altitude during loading.
- Start, regeneration should be strictly in accordance with the GHT series catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



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GCJ-41 柴油加氢精制催化剂

GCJ-41 Diesel Hydrofining Catalyst

产品特点: GCJ-41 是以改性双孔道 γ - Al_2O_3 为载体, 以钨、镍为金属活性组份, 助剂增强并调整酸性功能, 采用先进制备方法生产的新一代加氢精制催化剂。具有以下特点:

- 较低堆密度, 强度高
- 金属组元匹配合理, 分布均匀
- 适宜的与金属组元相匹配的酸性功能
- 活性稳定性好, 具有较强的抗结焦能力, 使用寿命长
- 适应性强, 对多种原料均能达到精制要求, 同时芳烃饱和性能好

Product Features: GCJ-41 is a new generation of hydrofining catalyst produced by advanced preparation method, which is based on modified double channel γ - Al_2O_3 as carrier, tungsten-nickel as metal active component, additives to enhance and adjust the acid function. It has the following characteristics:

- Low density, high strength
- Metal components are properly matched and evenly distributed
- Suitable acidic function matched with metal components
- Good activity stability, strong anti-coking ability, long service life
- Strong adaptability, can meet the refining requirements for a variety of raw materials, and good aromatic saturation performance at the same time

产品理化性质

Pyhsical and Chemical Properties

牌号 Brand	GCJ-41
外形 Appearance	三叶草形 Clover
规格, mm Size Spec.	$\Phi 1.6 \times 3-8$
孔容, ml/g Pore Volme	0.45-0.55
比表面积, m^2/g Relative Surface Area	≥ 160
堆密度, g/ml Bulk Density	≥ 0.82
耐压强度, N/cm Crush Strength	≥ 180
NiO, m%	≥ 2.6
WO_3 , m%	≥ 27.0
助剂, % additives	



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应用范围: 适用于中压下直馏油品和二次加工油品的加氢精制、如直馏柴油、焦化柴油、FCC 及 RFCC 柴油等；适用于 CGO 加氢精制做 FCC 原料，可提高 FCC 装置的轻质油收率，减少 CGO 中碱氮对催化剂活性的破坏。

Application: GCJ-41 is suitable for hydrofining of medium-pressure straight-run distillate and processed distillate, such as straight-run diesel, coking diesel, FCC and RFCC diesel, etc. GCJ-41 is suitable for CGO hydrotreating as FCC raw material, which can improve the yield of light oil in FCC unit and mitigate the damage of catalyst activity by alkali nitrogen compound in CGO.

产品包装: 专用铁桶包装，内套双层塑料袋，净重 150Kg/桶

Packing Spec. Special steel drum packing, inner double plastic bag, net weight 150Kg/ drum

储存、使用注意事项

- 注意防水、防潮，防止其它化学品污染
- 搬运时不得摔、滚铁桶，装填时避免催化剂高空坠落
- 开工和再生时应严格按 GCJ 系列催化剂使用说明操作，必要时应在专业技术人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, to prevent other chemical contamination
- Do not drop or roll iron drums during handling, and avoid catalyst falling from high altitude during loading
- Start and regeneration should be strictly in accordance with the GCJ series catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



GCJ-42 柴油加氢精制催化剂

GCJ-42 Catalyst for diesel hydrofining

产品特点: GCJ-42 是以改性双孔道 γ - Al_2O_3 为载体, 以钼、钨、镍为金属活性组份, 助剂增强并调整酸性功能, 采用先进制备方法生产的新一代加氢精制催化剂。具有以下特点:

- 较低堆密度, 强度高
- 金属组元匹配合理, 分布均匀
- 适宜的与金属组元, 相匹配的酸性功能
- 活性稳定性好, 具有较强的抗结焦能力, 使用寿命长
- 适应性强, 对多种原料均能达到精制要求, 同时芳烃饱和性能好
- 再生性能好

Product features: GCJ-42 is a new generation of hydrofining catalyst produced by advanced preparation technology with modified double channel γ - Al_2O_3 as the carrier, molybdenum, tungsten and nickel as the metal active component, additives to enhance and adjust the acid function. It has the following characteristics:

- Low density, high strength
- Metal components are properly matched and evenly distributed
- Suitable acidic function matched with metal components
- Good activity stability, strong anti-coking ability, long service life
- Strong adaptability, can meet the refining requirements for a variety of raw materials, and good aromatics saturation performance
- Good regeneration performance

产品理化性质

Physical and Chemical Properties

牌号 Brand Name	GCJ-42
外形 Appearance	三叶草形 Clover
规格, mm Size Spec.	$\Phi 1.6 \times 3-8$
孔容, ml/g Pore Volume	0.45-0.55
比表面积, m^2/g Relative Surface Area	≥ 160
堆密度, g/ml Bulk Density	≥ 0.82
耐压强度, N/cm Piece Crush Strength	≥ 180
MoO_3 , m%	≥ 8.0
WO_3 , m%	≥ 19.0



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NiO, m%	≥3.5
助剂, % additives	---

应用范围: 适用于中压下直馏油品和二次加工油品的加氢精制、如直馏柴油、焦化柴油、FCC 及 RFCC 柴油等；适用于 CGO 加氢精制做 FCC 原料，可提高 FCC 装置的轻质油收率，减少 CGO 中碱氮对催化剂活性的破坏。

Application: GCJ-42 is suitable for hydrofining of medium-pressure straight-run oil and secondary processed oil, such as straight-run diesel, coking diesel, FCC and RFCC diesel, etc. It is suitable for CGO hydrorefining as FCC raw material, which can improve the yield of light oil in FCC unit and reduce the destruction of catalyst activity by alkali nitrogen in CGO

包装: 专用铁桶包装，内套双层塑料袋，净重 150Kg/桶

Packing Spec.: Special steel drum packing, inner double plastic bag, net weight 150Kg/ drum

储存、使用注意事项:

- 注意防水、防潮，防止其它化学品污染
- 搬运时不得摔、滚铁桶，装填时避免催化剂高空坠落
- 开工和再生时应严格按 GCJ 系列催化剂使用说明操作，必要时应在专业技术人员指导下进行

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, to prevent other chemical pollution
- Do not drop or roll iron drums during handling, and avoid catalyst falling from high altitude during loading
- Start and regeneration should be strictly in accordance with the GCJ series catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



GHT-23 加氢保护剂

GHT-23 hydrogenation Guard Catalyst

产品特点: GHT-23 加氢保护剂采用改性 γ - Al_2O_3 压片成型载体, W-Ni 为主组元的新一代加氢保护剂。

具有以下特点:

- 强度高、颗粒大
- 较大的孔径
- 积碳速率慢, 活性稳定性好

Product Features: GHT-23 hydrogenation protectors using modified γ - Al_2O_3 tablet forming carrier, W-Ni as the main component of a new generation of hydrogenation protectors. It has the following characteristics:

- High strength, large particle
- Large pore size
- Slow carbon deposition rate, good activity stability

产品理化性质

Physical and Chemical Properties

牌号 Brand Name	GHT-23
外观 appearance	圆柱状 Cylinder
规格,mm Size Spec.	$\Phi 4.0$ -4.5
强度,N/cm Piece Crush Strength	≥ 250
堆密度, g/ml Bulk Density	≥ 0.80
WO ₃ , m%	≥ 5.50
NiO, m%	≥ 1.0
助剂, m% Promoter	---

应用范围: 主要用于汽柴油中低压加氢时, 加氢饱和原料油双烯和沉积所含少量残碳及残铁等杂质, 防止加氢精制催化剂床层顶部结焦导致反应压力增加, 以保护加氢精制催化剂, 使装置正常运转。特别适用于作前置床层保护下游的主催化剂。

Application: Mainly used in low pressure hydrogenation of gasoline and diesel, hydrogenating saturated raw oil diene and a small amount of residual carbon and residual iron and other impurities contained in the deposition, to prevent the top of the hydrofining catalyst bed coking resulting in an



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increase in reaction pressure, in order to protect the hydrofining catalyst and make the device run normally. It is especially suitable for use as a pre-bed to protect the main catalyst downstream

产品包装: 专用纸桶包装, 内套双层塑料袋, 净重 30Kg/桶

Packing Spec.: Paper drum packing, inner double plastic bag, net weight 30Kg/ drum

储存、使用注意事项

- 注意防水、防潮, 防止其它化学品污染
- 搬运时不得摔滚纸桶, 装填时避免催化剂高空坠落

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, to prevent other chemical pollution
- Do not roll the paper bucket when handling, and avoid catalyst falling from high altitude when loading.



GHC-51 加氢改质催化剂

GHC-51 Hydromodification catalyst

产品特点: GHC-51 是以特定分子筛和 γ -Al₂O₃ 混合物为载体, 以钨、镍为金属活性组份, 具有特定酸值和酸强度的新一代加氢改质催化剂。具有以下特点:

- 特定分子筛结构稳定, 具有特定的酸性质
- 具有较强的抗氨和抗酸性能
- 活性高, 有强的脱硫, 脱氮, 芳烃饱和及开环反应性能
- 适应多种原料加氢改质要求, 别可使劣质柴油最大限度提高十六烷值, 同时提高柴油收率
- 使用周期长, 再生性能好

Product features: GHC-51 is based on a specific molecular sieve and γ -Al₂O₃ mixture as the carrier, tungsten nickel as the metal active component, with a specific acid value and acid strength. A new generation of hydrogenation catalyst. It has the following characteristics:

- The specific molecular sieve has a stable structure and specific acid properties.
- It has strong anti-ammonia and anti-acid properties
- High activity, strong desulfurization, nitrogen removal, aromatic saturation and ring-opening reaction performance
- Adapt to the requirements of hydrogenation of various raw materials, especially can maximize the cetane number of inferior diesel oil, and improve the diesel oil yield
- Long operation cycle, good regeneration performance

产品理化性质

Physical and Chemical Properties

牌 号 Brand Name	GHC-51
外形 Appearance	三叶草形 Clover
规格,mm Size Spec.	Φ1.6×3-8
孔容, ml/g Pore Volume	0.3-0.4
比表面积, m ² /g Relative Surface Area	≥270
堆密度, g/ml Bulk Density	≥0.90
耐压强度, N/cm Piece Crush Strength	≥180
NiO, m%	≥8.5
WO ₃ , m%	≥22.0
红外酸性, mM/g infrared acidity	≥1.0



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应用范围: 适用于中高压下劣质柴油, 常三/减一线馏份油等多品种劣质油品的加氢裂化(改质), 生产优质、煤、柴、润及化工石脑油和蒸汽裂解制乙烯原料。该剂可用于单段单剂工艺中, 亦可用于二段或多段加氢工艺中。

Application: It is suitable for hydrocracking (upgrading) of low-quality diesel oil under middle and high pressure, regular three/reduced first-line distillate oil and other low-quality oil products, and the production of high-quality steam and coal. Wood, water and chemical naphtha and steam cracking to produce ethylene raw materials. The agent can be used in single-stage single-dose process, and can also be used in two-stage or multi-stage hydrogenation process.

包装: 专用铁桶包装, 内套双层塑料袋, 净重 160Kg/桶

Packing Spec.: Special iron drum packing, inner double plastic bag, net weight 160Kg/ drum

储存、使用注意事项:

- 注意防水、防潮, 防止其它化学品污染
- 搬运时不得摔、滚铁桶, 装填时避免催化剂高空坠落
- 开工和再生时应严格按 GHC 系列催化剂使用说明操作, 必要时应在专业技术人员指导下进行

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, to prevent other chemical pollution
- Do not drop or roll iron drums during handling, and avoid catalyst falling from high altitude during loading
- Start-up and regeneration should be strictly in accordance with the GHC series catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



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GJN-61 临氢降凝催化剂

GJN-61 Hydro Dewaxing catalyst

产品特点: GJN-61 该催化剂为改性分子筛和 Al_2O_3 混合产品。该催化剂具有以下特点:

- 有较多中强酸，且孔容增大，加氢/脱氢功能与酸性功能更加匹配；
- 高的活性和选择性，临氢降凝的降凝效果好，柴油收率高；
- 用于柴油加氢精制-临氢组合工艺中（即加氢降凝），在脱硫脱氮的同时，柴油收率提高，较大幅度提高柴油的十六烷值等特点；

Product Features: GJN-61 The catalyst is a mixture of modified molecular sieve and Al_2O_3 . The catalyst has

- There are more medium and strong acids, and the pore volume increases, and the hydrogenation/dehydrogenation function is more matched with the acidic function
- High activity and selectivity, hydrogen deoagulation effect is good, high diesel yield;
- It is used in the combined process of diesel hydrofining-hydrogen treatment (that is, hydrogenation deoagulation), while desulfurizing and denitrification, the diesel oil yield is improved, and the cetane number of diesel oil is greatly improved

产品理化性质

Physical and Chemical Properties

牌号 Brand	GJN-61
外形 Appearance	三叶草形 Clover
规格, mm Size Spec.	$\Phi 1.6 \times 3-8$
孔容, ml/g Pore Volume	0.25-0.35
比表面积, m^2/g Relative Surface Area	≥ 270
堆密度, g/ml Bulk Density	0.70- 0.78
耐压强度, N/cm Piece Crush Strength	≥ 100
高硅沸石, m % High Silica Zeolite	≥ 68
NiO, m%	≥ 1.5
改性助剂, m % Modified Promoter	≥ 4.6

应用范围: 单段临氢降凝适用于原料质量较好，蜡含量高的直馏柴油；而加氢降凝适用于处理原料质量较差的催化柴油，焦化柴油二次加工油，以生产优质低凝柴油。

Application: Single stage hydrogen dewax is suitable for straight-run diesel with good raw material quality and high wax content; The hydrocoagulation reduction is suitable for the treatment of catalytic



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diesel with poor raw material quality and the secondary processing oil of coking diesel to produce high quality and low coagulation diesel

包装: 专用铁桶密封包装, 内层用布袋再套塑料袋, 140Kg/桶

Packing Spec.: special Steel drum with sealed packing, inner layer with cloth bag and plastic bag, 140Kg/ drum

储存、使用注意事项:

- 注意防水、防潮, 严禁与其它化学品和烃类物质接触
- 搬运时不得摔、滚铁桶; 装填时避免催化剂高空坠落
- 开工和再生应严格按 GJN-61 催化剂使用说明操作, 必要时应在专业技术人员指导下进行

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons
- Do not drop or roll iron barrels when handling; Avoid catalyst falling from high altitude during loading
- Start-up and regeneration should be strictly in accordance with the instructions for the use of GJN-61 catalyst operation, if necessary, should be carried out under the guidance of professional and technical personnel



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GFB-71 芳烃饱和加氢催化剂

GFB-71 Aromatic Saturated Hydrogenation Catalyst

产品特点: GFB-71 催化剂由于采用特殊制备方法,对载体的酸性和结构热稳定进行了改性,催化剂具有以下特点:

- 较高的加氢反应活性、好的加氢饱和性和加氢异构性
- 结构稳定,强度高,使用周期长
- 再生活性好

Product features: GFB-71 catalyst due to the use of special preparation method, the acidity of the carrier and structural thermal stability were modified, the catalyst has the following characteristics:

- High hydrogenation reactivity, good hydrogenation saturation and hydrogenation isomerization
- Stable structure, high strength, long service cycle
- Good regeneration activity

产品理化性质

Physical and Chemical Properties

牌号 Brand	GFB-71
外形 Appearance	三叶草形 Clover
规格,mm Size Spec.	Φ1.2×3-8
孔容, ml/g Pore Volume	1.5-1.7
比表面积, m ² /g Relative Surface Area	≥260
中值孔直径, Nominal Pore Diameter	0.72- 0.82
耐压强度, N/cm Crush Strength	≥80
WO ₃ , m%	≥27.0
NiO, m%	≥3.0
SiO ₂ , m%	≥2.5
助剂, m% Promoter	---

应用范围: 适用于芳烃加氢反应过程,包括加氢饱和及加氢异构化过程,也可用于烯烃或其他不饱和烃的加氢反应过程;也适用于各种中间馏分油的加氢处理过程。

Application: Suitable for the hydrogenation of aromatics, including hydrogenation saturation and hydrogenation isomerization, and can also be used for the hydrogenation of olefin or other unsaturated hydrocarbons; It is also suitable for hydrogenation of various middle distillates

包装: 专用铁桶密封包装,内层用布袋再套塑料袋,140Kg/桶



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Packing: special iron drum sealed packing, inner layer with cloth bag and plastic bag, 140Kg/ drum

储存、使用注意事项:

- 注意防水、防潮，严禁与其它化学品和烃类物质接触
- 搬运时不得摔、滚铁桶
- 开工和再生应严格按 GFB 系列催化剂使用说明操作，必要时应在专业技术人员指导下进行

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons
- Do not drop or roll iron barrels during handling
- Start and regeneration should be strictly in accordance with the GFB series catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



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GFB-72 芳烃饱和加氢催化剂

GFB-72 Aromatics Saturation Hydrogenation Catalyst

产品特点: FB-72 催化剂采用大孔径 Al_2O_3 压片成型, 对负载金属组元进行特殊处理改性, 是新一代加氢处理催化剂, 具有以下特点:

- 优异的单环和双环芳烃加氢活性, 饱和程度高。
- 兼有好的加氢脱硫脱氮和异构化性能
- 再生性能好

Product features: FB-72 catalyst adopts large aperture Al_2O_3 sheet molding, special treatment and modification of the supported metal components, is a new generation of hydrogenation catalyst, with the following characteristics:

- Excellent hydrogenation activity of monocyclic and bicyclic aromatic hydrocarbons, high degree of saturation.
- Good hydrodesulfurization, denitrification and isomerization performance
- Good regeneration performance

产品理化性质:

Physical and Chemical Properties

牌号 Brand	GFB-72
外观 Appearance	圆柱状 Cylinder
规格, mm Size Spec.	$\Phi 4.0 \sim 4.5$
孔容, ml/g Pore Volume	0.7~0.8
比表面积, m^2/g Relative Surface Area	≥ 150
堆密度, g/ml Bulk Density	0.60~0.68
耐压强度, N/cm Crush Strength	≥ 80
MoO_3 , m%	≥ 20.0
NiO , m%	≥ 7.0

应用范围: 适用于中间馏分油的加氢处理过程, 尤其适用于芳烃深度饱和加氢和异构化反应。

Application: Suitable for hydrogenation of middle distillate, especially for deep saturated hydrogenation and isomerization of aromatics.

包装: 专用铁桶密封包装, 内层用布袋再套塑料袋, 140Kg/桶

Packing Spec.: special iron drum sealed packing, inner layer with cloth bag and plastic bag, 140Kg/drum



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储存、使用注意事项:

- 注意防水、防潮，严禁与其它化学品和烃类物质接触。
- 搬运时不得摔、滚铁桶；装填时避免催化剂高空坠落。
- 开工和再生应严格按 GFB 系列催化剂使用说明操作，必要时应在专业技术人员指导下进行

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons.
- Do not drop or roll iron barrels when handling; Avoid catalyst falling from high altitude during loading.
- Start and regeneration should be strictly in accordance with the GFB series catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



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GJS-81 渣油加氢脱金属催化剂

GJS-81 Residual Hydrodemetallization Catalyst

产品特点: GJS-81 催化剂由于采用专用大孔氧化铝载体, 具有较大孔容和较大孔径, 催化剂具有以下特点:

- 容金属能力强, 脱金属(钒、镍及其他金属)率高
- 容碳能力强, 脱残炭率高
- 减缓催化剂失活, 使用周期长

Product features: Due to the use of special large hole alumina carrier, GJS-81 catalyst has a large pore volume and a large pore diameter, the catalyst has the following characteristics:

- Strong metal capacity, high metal removal (vanadium, nickel and other metals) rate
- Strong carbon capacity, high carbon removal rate
- Slow catalyst deactivation, long service cycle

产品理化性质:

Physical and Chemical Properties

牌号 Brand	GJS-81
外形 appearance	三叶草形 Clover
规格,mm Size Spec.	Φ1.2×3-8
孔容, ml/g Pore Volume	1.5-1.7
比表面积, m ² /g Relative Surface Area	≥260
中值孔直径,NM Nominal Pore Diameter	≥30
耐压强度, N/cm Piece Crush Strength	≥80
MoO ₃ , m%	≥9.0
NiO, m%	≥2.0

应用范围: 适用于重质烃类原料(包括原油、常压或减压渣油和常压或减压馏分油)的加氢脱金属, 特别适用于金属含量高的减压渣油的加氢脱金属, 以生产金属含量较低具有高附加值的原料油

Application: Suitable for the hydrodemetallization of heavy hydrocarbon raw materials (including crude oil, atmospheric or vacuum residual oil and atmospheric or vacuum distillate oil), especially suitable for the hydrodemetallization of vacuum residual oil with high metal content to produce raw oil with low metal content and high added value

包装: 专用铁桶密封包装, 内层用布袋再套塑料袋, 140Kg/桶



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Packing: special Steel drum sealed packing, inner layer with cloth bag and plastic bag, 140Kg/ barrel of oil

储存、使用注意事项:

- 注意防水、防潮，严禁与其它化学品和烃类物质接触
- 搬运时不得摔、滚铁桶
- 开工应严格按 GFB 系列催化剂使用说明操作，必要时应在专业技术人员指导下进行

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons
- Do not drop or roll iron barrels during handling
- The operation should be strictly in accordance with the GFB series catalyst instructions, and should be carried out under the guidance of professional and technical personnel if necessary



GHT-11 干气加氢精制催化剂

GHT-11 Catalyst for Dry Gas Hydrofining

产品特点: GHT-11 干气加氢催化剂是以改性 γ -Al₂O₃ 为载体, 以钨镍及助剂为活性组份。具有以下特点:

- 良好的烯烃和有机硫低温加氢活性, 尤其烯烃饱和性能更为突出, 可使催化干气、焦化干气或焦化、催化混合干气等经加氢精制后, 完全满足制氢工艺要求;
- 其适应性好, 对炼厂干气汽柴油吸收加氢、循环绝热床加氢及等温 2 绝热床加氢三种流程均可适用;
- 抗结炭能力强, 使用寿命长;
- 再生性能好;

Product features: GHT-11 dry gas hydrogenation catalyst is based on modified γ -Al₂O₃ as the carrier, with tungsten nickel and additives as the active components. Catalyst has

- Good low temperature hydrogenation activity of olefin and organic sulfur, especially the saturation performance of olefin is more prominent, which can make catalytic dry gas. After being hydrotreated, the coking dry gas or the coking and catalytic mixed dry gas can fully meet the requirements of hydrogen production process
- Its adaptability is good, and it can be applied to the three processes of refinery dry gas steam and diesel oil absorption hydrogenation, circulating adiabatic bed hydrogenation and isothermal 2 adiabatic bed hydrogenation
- Strong carbon resistance, long service life
- Good regeneration performance

产品理化性质

Physical and Chemical Properties

牌号 Brand	GHT-11
外形 Appearance	三叶草形 Clover
规格, mm Size Spec.	Φ1.6-2.0
孔容, ml/g Pore Volume	0.50-0.60
比表面积, m ² /g Surface Area	≥180
堆密度, g/ml Bulk Density	≥0.68
耐压强度, N/cm Crush Strength	≥150
NiO, m%	≥2.1
WO ₃ , m%	≥10.0
助剂, % additives	---



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应用范围: 适用于天然气、液化石油气、焦化干气、催化干气、常压瓦斯、加氢装置低压气等烃类中的有机硫化物，氮化物以及 20% 左右不饱和烃的加氢饱和转化，并可以再生使用。GHT-11 加氢精制催化剂可单独使用。如采用 GHT-11/ GHT-12 二段装填工艺，可使烯烃饱和、脱硫、脱氮达到最佳反应效果。

Application: Suitable for natural gas, liquefied petroleum gas, coking dry gas, catalytic dry gas, atmospheric pressure gas, low pressure gas in hydrogenation units such as organic sulfide, nitriding and about 20% unsaturated hydrocarbons hydrogenation saturation conversion, and can be recycled. The GHT-11 hydrofining catalyst can be used alone. If the use of GHT-11/ GHT-12 two-stage loading process, can make olefin saturation, desulfurization, nitrogen removal to achieve the best reaction effect

包装: 专用铁桶包装，内套双层塑料袋，净重 140Kg/桶

Packing: Special iron drum packing, inner double plastic bag, net weight 140Kg/ drum

储存、使用注意事项:

- 注意防水、防潮，防止其它化学品污染
- 搬运时不得摔、滚铁桶，装填时避免催化剂高空坠落
- 开工、再生时应严格按 GHT 系列催化剂使用说明操作，必要时应在专业技术人员指导下进行。

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, to prevent other chemical pollution
- Do not drop or roll iron drums during handling, and avoid catalyst falling from high altitude during loading
- Start, regeneration should be strictly in accordance with the GHT series catalyst instructions operation, if necessary, should be carried out under the guidance of professional and technical personnel



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GHT-12 干气加氢精制催化剂

GHT-12 Hydrofining Catalyst for dry gas

产品特点: GHT-12 干气加氢催化剂以改性 γ -Al₂O₃ 为载体, 以钨镍及助剂为活性组份。具有以下特点:

- 良好的烯烃和有机硫低温加氢活性, 尤其低温脱硫脱氮性能更为突出, 可使催化干气、焦化干气或焦化、催化混合干气等经加氢精制后, 完全满足制氢工艺要求;
- 其适应性好, 对炼厂干气汽柴油吸收加氢、循环绝热床加氢及等温 2 绝热床加氢三种流程均可适用;
- 抗结炭能力强, 使用寿命长;
- 再生性能好;

Product features: GHT-12 dry gas hydrogenation catalyst is based on modified γ -Al₂O₃ as the carrier, with tungsten nickel and additives as the active components. Catalyst has

- Good low temperature hydrogenation activity of olefin and organic sulfur, especially the low temperature desulfurization and denitrification performance is more prominent, which can make catalytic dry gas. After being hydrorefined, the coking dry gas or the coking and catalytic mixed dry gas can fully meet the requirements of hydrogen production process
- Its adaptability is good, and it can be applied to the three processes of refinery dry gas steam and diesel oil absorption hydrogenation, circulating adiabatic bed hydrogenation and isothermal 2 adiabatic bed hydrogenation
- Strong carbon resistance, long service life
- Good regeneration performance

产品理化性质

Physical and Chemical Properties

牌号 Brand	GHT-12
外形 Apperance	三叶草形 Clover
规格, mm Size Spec.	Φ1.6-2.0
孔容, ml/g Pore Volume	0.50-0.60
比表面积, m ² /g Surface Area	≥180
堆密度, g/ml Bulk Density	≥0.72
耐压强度, N/cm Anti Crush Strength	≥150
NiO, m%	≥1.7
WO ₃ , m%	≥15.0
助剂, % Promoter	---



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应用范围: 适用于天然气、液化石油气、焦化干气、催化干气、常压瓦斯、加氢装置低压气等烃类中的有机硫化物，氮化物以及 20%左右不饱和烃的加氢饱和转化，并可以再生使用。GHT-12 加氢精制催化剂可单独使用。如采用 GHT-11/GHT-12 二段装填工艺，可使烯烃饱和、脱硫、脱氮达到最佳反应效果

Application: Suitable for natural gas, liquefied petroleum gas, coking dry gas, catalytic dry gas, atmospheric pressure gas, low pressure gas in hydrogenation units such as organic sulfide, nitriding and about 20% unsaturated hydrocarbons hydrogenation saturation conversion, and can be recycled. The GHT-12 hydrofining catalyst can be used alone. If the use of GHT-11/ GHT-12 two-stage loading process, can make olefin saturation, desulfurization, nitrogen removal to achieve the best reaction effect

包装: 专用铁桶包装，内套双层塑料袋，净重 140Kg/桶

Packing: Special iron drum packing, inner double plastic bag, net weight 140Kg/ drum

储存、使用注意事项:

- 注意防水、防潮，防止其它化学品污染
- 搬运时不得摔、滚铁桶，装填时避免催化剂高空坠落
- 开工,再生时应严格按 GHT 系列催化剂使用说明操作，必要时应在专业技术人员指导下进行

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, to prevent other chemical pollution
- Do not drop or roll iron drums during handling, and avoid catalyst falling from high altitude during loading
- Start, regeneration should be strictly in accordance with the GHT series catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



GQJ-50 汽油非临氢改质催化剂

GQJ-50 Gasoline Non-hydrogen Modification Catalyst

产品特点: 在低压、非临氢的催化反应条件下, 以低辛烷值的直馏汽油为原料, 在 GQJ-50 催化剂的作用下, 发生脱氢芳构化、异构化、齐聚、环化和选择性裂解等一系列化学反应, 生产不含烯烃的高辛烷值汽油调和组分和优质液化气。直馏汽油非临氢改质技术具有改质汽油辛烷值高、烯烃含量低、干气产率低、总液收高的特点; 该催化剂为改性分子筛和 γ - Al_2O_3 混合产品, 具有以下特点:

- 高的活性和选择性
- 较强的抗硫、抗氯能力
- 反应原料无需精制
- 反应条件缓和, 热效应不大等特点

Product features: Under the catalytic reaction condition of low pressure and non-hydrophilic, a series of chemical reactions such as dehydrogenation aromatization, isomerization, oligomerization, cyclization and selective cracking of low-octane straight-run gasoline are carried out under the action of GQJ-50 catalyst to produce high-octane gasoline blending components and high-quality liquefied gas without olefin. The non-hydrostatic modification technology of straight-run gasoline has the characteristics of high-octane number, low olefin content, low dry gas yield and high total liquid yield. The catalyst is a mixed product of modified molecular sieve and γ - Al_2O_3 , which has

- High activity and selectivity
- Strong resistance to sulfur and chlorine
- Raw materials need not be refined
- The reaction conditions are mild and the thermal effect is not large

产品理化性质

Physical and Chemical Properties

牌号 Brand	GQJ-50
外形 Appearance	圆柱条 Cylinder Strip
规格, mm Size Spec.	$\Phi 2 \times 3-8$
孔容, ml/g Pore Volume	0.27-0.30
比表面积, m^2/g Surface Area	≥ 280
堆密度, g/ml Bulk Density	0.68- 0.78
耐压强度, N/cm Anti Crush Strength	≥ 100
Al_2O_3 , m %	≥ 32
SiO_2 , m %	≥ 64



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改性助剂, m % additives	≥0.4
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应用范围: 适用于装置结构单一的小型炼厂, 在汽油质量升级过程中, 具有充分的实用性和经济性。适用于 C3-C11 馏份石脑油或油田轻烃的非临氢改质。

Application: Suitable for small refineries with single device structure, it has full practicability and economy in the process of gasoline quality upgrading. Suitable for non-hydrogenic modification of C3-C11 naphtha or light hydrocarbons in oil fields.

包装: 专用铁桶密封包装, 内层用布袋再套塑料袋, 160Kg/桶

Packing: special iron drum sealed packing, inner layer with cloth bag and plastic bag, 160Kg/ drum

储存、使用注意事项:

- 注意防水、防潮, 严禁与其它化学品和烃类物质接触
- 搬运时不得摔、滚铁桶
- 产品可以氧化态或还原态出厂
- 开工和再生应严格按 GQJ-50 催化剂使用说明操作, 必要时应在专业技术人员指导下进行

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons
- Do not drop or roll iron barrels during handling
- Products can be oxidized state or reduced state factory
- Start-up and regeneration should be strictly in accordance with the GQJ-50 catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



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JN-63 临氢降凝催化剂

JN-63 Catalytical Dewaxing Catalyst Under Hydrogen Environment

产品特点: JN-63 催化剂为改性分子筛和 Al_2O_3 混合产品, 催化剂具有以下特点:

- 有较多中强酸, 且孔容增大, 加氢功能与酸性功能更加匹配;
- 高的活性和选择性, 临氢降凝的降凝效果好, 柴油收率高;
- 用于柴油加氢精制-临氢组合工艺中(即加氢降凝), 在脱硫脱氮的同时, 柴油收率提高, 较大幅度提高柴油的十六烷值;

Product Features: JN-63 catalyst is a mixed product of modified molecular sieve and Al_2O_3 , and the catalyst has the following characteristics:

- There are more medium and strong acids, and the pore volume increases, and the hydrogenation function is properly matched with the acidic function.
- High activity and selectivity, catalytical dewaxing performance is good, diesel oil yield is high.
- It is used in the integrated process of diesel hydrofining-hydrogen treatment (that is, hydrogenation dewaxing), while desulfurizing and denitrification, the diesel oil yield is improved, and the cetane number of diesel oil is greatly increased

产品理化性质

Physical and Chemical Properties

牌号 Brand	JN-63
外观 Appearance	三叶草形 Clover
规格, mm Size Spec.	$\Phi 1.6 \times 3-8$
孔容, ml/g Pore Volume	0.25~0.35
比表面积, m^2/g Surface Area	≥ 270
堆密度, g/ml Bulk Density	0.70~0.78
耐压强度, N/cm Anti Crush Strength	≥ 100
高硅沸石, m% High Silica Zeolite	≥ 68
NiO, m%	≥ 1.5
改性助剂, m% Modified Promoter	≥ 4.6

应用范围: 单段临氢降凝适用于原料质量较好, 蜡含量高的直馏柴油; 而加氢降凝适用于处理原料质量较差的催化柴油, 焦化柴油二次加工油, 以生产优质低凝柴油。



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Application: single stage hydrogen deoagulation is suitable for straight-run diesel with good raw material quality and high wax content; The hydrocoagulation reduction is suitable for the treatment of catalytic diesel with poor raw material quality and the secondary processing oil of coking diesel to produce high quality and low coagulation diesel.

包装: 专用铁桶密封包装, 内层用布袋再套塑料袋, 130Kg/桶

Packing: special iron drum sealed packing, inner layer with cloth bag and plastic bag, 130Kg/ drum

储存、使用注意事项:

- 注意防水、防潮, 严禁与其它化学品和烃类物质接触。
- 搬运时不得摔、滚铁桶; 装填时避免催化剂高空坠落。
- 开工和再生应严格按 GJN-61 催化剂使用说明操作, 必要时应在专业技术人员指导下进行

Precautions for storage and use:

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons.
- Do not drop or roll iron barrels when handling; Avoid catalyst falling from high altitude during
- Start-up and regeneration should be strictly in accordance with the instructions for the use of GJN-61 catalyst operation, if necessary, should be carried out under the guidance of professional and technical personnel



GZ-10 非临氢改质催化剂

GZ-10 Non-hydrogenic Modification Catalyst

产品特点: GZ-10 催化剂为改性分子筛和 Al_2O_3 混合产品, 催化剂具有以下特点:

- 有较多中强酸, 且孔容增大, 改质功能与酸性功能更加匹配;
- 高的活性和选择性, 改质效果好, 汽油收率高;
- 用于石脑油、醚后 LPG 及催化干气等非临氢组合工艺中, 在异构化、芳构化及叠合的同时, 汽油收率提高, 较大幅度提高汽油的辛烷值;

Product features:

GZ-10 catalyst is a mixture of modified molecular sieve and Al_2O_3 , and the catalyst has the following characteristics:

- There are more medium and strong acids, and the pore volume increases, and the modification function is more matched with the acidic function.
- High activity and selectivity, good modification effect, high gasoline yield.
- For naphtha, ether LPG and catalytic dry gas and other non-hydrogenic environment process, the isomerization, aromatization and polymerization reaction happens at the same time, the gasoline yield is improved, the octane number of gasoline is greatly lifted

产品理化性质

Physical and Chemical Properties

催化剂牌号 Brand	GZ-10
形状 Shape	三叶草条状 Clover
尺寸, mm Size Spec.	D 2~3 x3~10
孔体积, mL/g Pore Volume	≤ 0.30
比表面积, m^2/g Surface Area	≤ 260
压碎强度, N/cm	≤ 150
装填密度, t/m^3 Bulk Density	0.65~0.68
Al_2O_3 m%	≥ 30
SiO_2 m%	≥ 50

应用范围: 非临氢改质催化剂适用于低硫、低氮直馏石脑油和焦化加氢石脑油, 醚后 C4 及催化干气等原料, 生产高辛烷值汽油调和组分。



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Application: The non-hydrogenic modification catalyst is suitable for the production of high octane gasoline blending components from low sulfur and low nitrogen straight-run naphtha and coking hydrogenated naphtha, ether C4 and catalytic dry gas.

产品包装: 专用铁桶密封包装，内层用布袋再套塑料袋，25Kg/桶。

Product packaging special iron drum sealed packaging, the inner layer with cloth bags and plastic bags, 25Kg/ barrel.

储存、使用注意事项

- 注意防水、防潮，严禁与其它化学品和烃类物质接触。
- 搬运时不得摔、滚铁桶；装填时避免催化剂高空坠落。
- 开工和再生应严格按 GZ-10 催化剂使用说明操作，必要时应在专业技术人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons.
- Do not drop or roll iron barrels when handling; Avoid catalyst falling from high altitude during loading.
- Start-up and regeneration should be strictly in accordance with the GZ-10 catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



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贵金属催化剂系列

Precious Metal Catalyst



GRS-10 重整催化剂

GRS-10 Platforming catalyst

产品特点: GRS-10 重整催化剂是采用先进制备技术, 用新组元 X 替代部分铂组元, 铼铂比为 2 的新一代半再生重整催化剂。具有以下特点:

- 载体晶相纯度高, 孔分布集中, 结构稳定, 强度高;
- 与现在工业使用的催化剂相比,活性相当、选择性更好;
- 积碳速率明显小于工业现用催化剂, 积碳量降低了 25%以上, 有更好的稳定性, 可长周期使用;
- 再生活性可恢复到新鲜剂水平;
- 铂含量目前催化剂中最低的, 大大降低催化剂成本;

Product features: GRS-10 reforming catalyst is a new generation of semi-regenerative reforming catalyst using advanced preparation technology, replacing part of the platinum component with a new component X and rhenium platinum ratio of 2. It has the following characteristics:

- High purity of carrier crystal phase, concentrated pore distribution, stable structure, high strength
- Compared with the catalysts used in industry today, the activity is comparable and the selectivity is better

The carbon deposition rate is significantly lower than that of industrial catalysts, the carbon deposition is reduced by more than 25%, has better stability, and can be used for a long period

- Regeneration activity can be restored to the level of fresh agent
- Platinum content is the lowest in the current catalyst, greatly reducing the catalyst cost

产品理化性质

Physical and Chemical Properties

牌号 Brand	GRS-10
外形 Appearance	圆柱条 Cylinder
规格, mm Size Spec.	Φ1.6×3-8
孔容, ml/g Pore Volume	0.45-0.55
比表面积, m ² /g Surface Area	≥180
堆密度, g/ml Bulk Density	0.72- 0.82
耐压强度, N/cm Anti Crush Strength	≥100
Pt/Al ₂ O ₃ , m%	≥0.09
Re/Al ₂ O ₃ , m%	≥0.19
X/Al ₂ O ₃ ,	≥0.29



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Cl/Al ₂ O ₃ ,	1.30±0.30
催化活性（转化率）% catalytic activity(conversion)	≥115

适用范围: 适用于中、低压半再生式固定床重整装置，生产高辛烷值汽油组分或化工芳烃产品；可单独使用，也可与其它重整催化剂混合装填使用。

Application: Suitable for medium and low pressure semi-regenerative fixed bed reforming unit, producing high octane gasoline components or chemical aromatics products; It can be used alone or mixed with other reforming catalysts. It can be used alone or mixed with other reforming catalysts.

产品包装: 专用铁桶密封包装，内层用布袋再套塑料袋，140Kg/桶

Product packaging: special iron drum sealed packaging, the inner layer with cloth bag and then set plastic bag, 140Kg/ drum

储存、使用注意事项

- 注意防水、防潮，严禁与其它化学品和烃类物质接触
- 搬运时不得摔、滚铁桶
- 产品可以氧化态或还原态出厂
- 开工和再生应严格按 GRS-10 催化剂使用说明操作，必要时应在专业技术人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons
- Do not drop or roll iron barrels during handling
- Products can be oxidized state or reduced state factory
- Start and regeneration should be strictly in accordance with the GRS-10 catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



GRS-14 选择性加氢催化剂

GRS-14 Selective Hydrogenation Catalyst

产品特点: 重整生成油中富含芳烃和溶剂油馏分, 同时含少量的烯烃。若要生产出合格的芳烃和溶剂油产品, 则必须脱除其中的烯烃。以保证芳烃产品的溴指数和酸洗颜色合格, 溶剂油的溴指数和铜片腐蚀试验合格。GRS-14 是以 γ - Al_2O_3 为载体, 以贵金属钯 Pd 及助剂为活性组份, 采用特定制备方法生产的新一代选择性加氢催化剂。具有以下特点:

- 具有良好的催化活性和选择性
- 在较缓和的工艺条件下, 可进行深度加氢精制脱烯烃
- 适应能力强, 各种压力的重整装置上均可使用
- 具有良好的稳定性, 可长周期稳定运转
- 再生性能好

Product features: The oil produced by reforming is rich in aromatics and solvent oil fractions, and contains a small amount of olefin. In order to produce qualified aromatics and solvent oil products, olefins must be removed from them. To ensure that the bromine index of aromatic products and pickling color qualified, the bromine index of solvent oil and copper corrosion test qualified. GRS-14 is a new generation selective hydrogenation catalyst produced by a specific preparation method with γ - Al_2O_3 as the carrier and palladium Pd and auxiliaries as the active components. It has the following characteristics:

- Good catalytic activity and selectivity
- Under moderate process conditions, deep hydrofining can be performed to remove olefins
- Strong adaptability, can be used on all kinds of pressure reforming equipment
- It has good stability and can operate stably for a long period
- Good regeneration performance

产品理化性质

Physical and Chemical Properties

牌号 Brand	GRS-14
外形 Appearance	三叶草形 Clover
规格 mm Size Spec.	$\Phi 1.6 \times 3-8$
孔容, ml/g Pore Volume	0.50-0.60
比表面积, m^2/g Surface Area	≥ 180
堆密度, g/ml Bulk Density	≥ 0.60
耐压强度, N/cm Anti Crush Strength	≥ 160
Pd/ Al_2O_3 , m%	≥ 0.29



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助剂, m% additives	---
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应用范围 适用于半再生和连续重整装置生产的重整生成油的苯馏分、BTX 馏分和全馏分以及抽余油的选择性加氢脱烯烃, 在较缓和的条件下, 达到精制油溴指数<100mg Br/100g 油, 芳烃损失< 0.5% 的要求。

Application: It is suitable for the selective hydrogenation of benzene, BTX and total distillate of reformed oil produced by semi-regenerative and continuous reforming units, and the extracted oil. Under moderate conditions, the refined oil bromine index is < 100 mg Br/ 100 g oil, and the aromatic loss is < 0.5%.

产品包装: 专用铁桶密封包装, 内层用布袋再套塑料袋, 140Kg/桶

Product packaging: special iron drum sealed packaging, the inner layer with cloth bag and then set plastic bag, 140Kg/ drum

储存、使用注意事项

- 注意防水、防潮, 防止其它化学品污染
- 搬运时不得摔、滚铁桶, 装填时避免催化剂高空坠落
- 开工、再生时应严格按 GRS-14 催化剂使用说明操作, 必要时应在专业技术人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, to prevent other chemical pollution
- Do not drop or roll iron drums during handling, and avoid catalyst falling from high altitude during loading
- Start, regeneration should be strictly in accordance with the GRS-14 catalyst instructions, if necessary, should be under the guidance of professional and technical personnel



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GRS-16 重整开工制氢催化剂

GRS-16 Catalyst for Hydrogen Production

产品特点: GRS-16 重整开工用催化剂是单铂组元、氟氯混合酸性组元的新一代催化剂。在较低反应温度下, 具有优异的石脑油中环烷脱氢率高; 产出氢气纯度高; 抗硫抗水等杂质污染能力强; 催化剂孔分布集中, 结构稳定, 强度高; 再生性能好等特点。

Product Features: GRS-16 reforming catalyst is a new generation catalyst of single platinum component and fluoro chloride mixed acid component. At lower reaction temperature, naphtha with excellent naphtha has high naphthane dehydrogenation rate. High purity of produced hydrogen; Strong resistance to sulfur, water and other impurities; The pore distribution of catalyst is concentrated, the structure is stable and the strength is high. Good regeneration performance and other characteristics.

产品理化性质

Physical and Chemical Properties

牌号 Brand	GRS-16
外形 Appearance	圆柱条 Cylinder
规格, mm Size Spec.	Φ1.6×3-8
孔容, ml/g Pore Volume	0.45-0.55
比表面积, m ² /g Surface Area	≥180
堆密度, g/ml Bulk Density	0.72- 0.82
耐压强度, N/cm Anti-Crush Strength	≥100
Pt/Al ₂ O ₃ , m%	≥0.5

应用范围: 适用于半再生式固定床重整装置开工时没有氢气来源的情况下, 用精制石脑油环烷脱氢生产高纯度氢气, 满足重整装置开工用氢的需要; 或在没有精制石脑油的情况下, 以粗石脑油为原料, 先用该催化剂反应产出的粗氢气供予加氢装置作为氢源, 生产精制石脑油,然后再以精制石脑油为原料, 用该催化剂反应产出的高纯度氢气供重整开工。

GRS-16 催化剂可以氧化态使用, 也以还原态使用, 使用还原态催化剂时, 制氢效果更好。

Application: It is suitable for producing high-purity hydrogen with naphtha naphthane dehydrogenation when there is no hydrogen source at the start of the semi-regenerative fixed bed reforming unit to meet the need of hydrogen for the start of the reforming unit; Or in the absence of refined naphtha, raw naphtha is used as raw material, the crude hydrogen produced by the reaction of the catalyst is supplied to the hydrogenation unit as a hydrogen source to produce refined naphtha, and then the refined



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naphtha is used as raw material and the high purity hydrogen produced by the reaction of the catalyst is supplied to the reforming start.

GRS-16 catalyst can be used in the oxidized state or in the reduced state, and the hydrogen production effect is better when using the reduced state catalyst

产品包装: 专用铁桶密封包装, 内层用布袋再套塑料袋, 140Kg/桶

Product packaging: special iron drum sealed packaging, the inner layer with cloth bag and then set plastic bag, 140Kg/ drum

储存、使用注意事项

- 注意防水、防潮, 严禁与其它化学品和烃类物质接触
- 搬运时不得摔、滚铁桶
- 产品可以氧化态或还原态出厂
- 开工和再生应严格按 GRS-16 催化剂使用说明操作, 必要时应在专业技术人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons
- Do not drop or roll iron barrels during handling
- Products can be oxidized state or reduced state factory
- Start and regeneration should be strictly in accordance with the GRS-16 catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



FR-10/FR-20 半再生重整催化剂

FR-10/FR-20 semi-regeneration Platforming catalyst

产品特点: FR-10/FR-20 催化剂是采用先进制备技术制备的新一代半再生重整催化剂。具有以下特点:

- 载体晶相纯度高, 孔分布集中, 结构稳定, 强度高;
- 与现在工业使用的催化剂相比, 活性相当、选择性更好;
- 积碳速率明显小于工业现用催化剂, 积碳量降低了 25%以上, 有更好的稳定性, 可长周期使用;
- 再生活性可恢复到新鲜剂水平;
- 铂含量目前催化剂中最低的, 大大降低催化剂成本;

Product features: FR-10/FR-20 reforming catalyst is a new generation of semi-regenerative reforming catalyst prepared by advanced preparation technology. It has the following characteristics:

- High purity of carrier crystal phase, concentrated pore distribution, stable structure, high strength.
- Compared with the catalysts used in industry today, the activity is comparable and the selectivity is better.
- The carbon deposition rate is significantly lower than that of industrial catalysts, the carbon deposition is reduced by more than 25%, has better stability, and can be used for a long period.
- Regeneration activity can be restored to the level of fresh agent.
- Platinum content is the lowest in the current catalyst, greatly reducing

该催化剂也可以作为芳烃饱和催化剂使用, 应用于此用途时, 型号为 FB-10/FB-11。

This catalyst also can be used in Aromatic Saturation application. When this catalyst used in this application, the brand is FB-10/FB-11.

产品理化性质

Physical and Chemical Properties

牌号 Brand	FR-10/FR-20
外形 Appearance	挤条 extrudates
规格, mm Size Spec.	Φ1.6×3-8
比表面积, m ² /g Surface Area	≥180
孔容, ml/g Pore Volume	0.45-0.55
堆密度, g/ml Bulk Density	0.72-0.76
耐压强度, N/cm Crush Strength	≥100
Pt, m%	0.23±0.01
Re, m%	0.35±0.02



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Cl, m%	1.30±0.30
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应用范围: 适用于中、低压半再生式固定床重整装置，生产高辛烷值汽油组分或化工芳烃产品；可单独使用，也可与其它重整催化剂混合装填使用

Application: It is suitable for medium and low pressure semi-regenerative fixed bed reforming device to produce high octane gasoline components or chemical aromatics products. It can be used alone or mixed with other reforming catalysts

产品包装: 专用铁桶密封包装，内层用布袋再套塑料袋，130Kg/桶

Product packaging: Special Steel drum sealed packaging, the inner layer with cloth bags and then set plastic bags, 130Kg/ drum

储存、使用注意事项

- 注意防水、防潮，严禁与其它化学品和烃类物质接触。
- 搬运时不得摔、滚铁桶
- 产品可以氧化态或还原态出厂
- 开工和再生应严格按 FR-10/FR-20 催化剂使用说明操作，必要时应在专业技术人员指导下

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons
- Do not drop or roll iron barrels during handling
- Products can be oxidized state or reduced state factory
- Start and regeneration should be strictly in accordance with the FR-10/FR-20 catalyst instructions, if necessary, should be under the guidance of professional and technical personnel



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CZ-100 连续重整催化剂

CZ-100 CCR Platforming Catalyst

产品特点: CZ-100 催化剂是我司研制开发的新一代高活性、高水热稳定性连续重整催化剂, 2012 年始已出口中东及东南亚等多套大型生产装置, 使用情况良好。具有以下特点:

- 催化剂的选择性好, C5+液体产物收率高, 芳烃产率和氢气产率增加;
- 催化剂积炭速率大幅度下降, 在相同反应苛刻度条件下, 催化剂积炭速率降低 20%以上;
- 保持催化剂良好的水热稳定性、持氯能力和优良的机械性能;
- 铂含量目前催化剂中最低的, 大大降低催化剂成本;

Product features: CZ-100 catalyst is a new generation of high activity and high hydrothermal stability continuous reforming catalyst developed by our company. Since 2012, it has been exported to the Middle East and Southeast Asia and other large-scale production plants, and the use is good. It has the following characteristics:

- Catalyst selectivity is good, C5+ liquid product yield is high, aromatics yield and hydrogen yield increase.
- Catalyst carbon deposition rate decreased significantly, under the same reaction severity conditions, catalyst carbon deposition rate decreased by more than 20%.
- Maintain good hydrothermal stability, chlorine holding capacity and excellent mechanical properties of the catalyst.
- Platinum content is the lowest in the current catalyst, greatly reducing the catalyst cost

产品理化性质

Physical and Chemical Properties

牌号 Brand	CZ-100
外形 Appearance	小球 globule
规格, mm size diameter	Φ1.6
比表面积, m ² /g Surface Area	200±20
堆密度, g/ml Bulk Denisty	0.56±0.02
耐压强度, N/cm Anti-Crush Strength	≧40
Pt, m%	0.28±0.01
Sn, m%	0.32±0.03
Cl, m%	1.0~1.3



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应用范围: 适用于以直馏石脑油、加氢裂化重石脑油、裂解汽油以及焦化汽油、催化汽油、凝析油等为原料生产高辛烷值汽油、芳烃和氢气的重整过程。

Application: Suitable for the reforming process of producing high octane gasoline, aromatic hydrocarbon and hydrogen from distilled naphtha, hydrocracked heavy naphtha, cracked gasoline, coking gasoline, catalytic gasoline and condensate.

产品包装: 专用铁桶密封包装，内层用布袋再套塑料袋，100Kg/桶。

Product packaging: special steel drum sealed packaging, the inner layer with cloth bags and then set plastic bags, 100Kg/ drum.

储存、使用注意事项

- 注意防水、防潮，严禁与其它化学品和烃类物质接触。
- 搬运时不得摔、滚铁桶
- 产品可以氧化态或还原态出厂
- 开工和再生应严格按 CZ-100 催化剂使用说明操作，应在专业人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons.
- Do not drop or roll iron barrels during handling
- Products can be oxidized state or reduced state factory
- Start-up and regeneration should be strictly operated in accordance with the instructions for the use of CZ-100 catalyst, and should be carried out under the guidance of professional personnel



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YG-05 碳四异构化催化剂

YG-05 C4 Isomerization catalyst

牌号 BRAND	YG-05
形状 Shape	三叶草条 Clover Shape
公称直径, Nominal diameter, mm	1.5~2.0
平均长度, Average length, mm	5±3
小于 1mm 长颗粒数, Particle less than 1 mm length, % w.	≤5
孔容, Pore volume, ml/g	0.3-0.5
比表面积, Surface area, m ² /g	≥200
堆密度 Bulk density, g/cm ³	0.8-0.9
耐压强度 Crushing strength, N	>60
铂含量 Pt content, wt%	0.2
氯含量 Cl content, wt%	>5



YG-10 低温烷烃异构化催化剂

YG-10 Low Temperature Paraffin Isomerization Catalyst

产品特性: YG-10 催化剂是新一代高活性、高选择性的 C5C6 低温异构化催化剂, 目前已经与国外签订了多套催化剂合同, 于 2015 年 7 月份已完成首套出口订单生产。具有主要特点:

- 催化剂活性高;
- 催化剂稳定性好;
- 反应过程中结焦量很少;
- 产品辛烷值高;

Product Features: YG-10 catalyst is a new generation of high activity, high selectivity C5C6 low temperature isomerization catalyst, has signed several sets of catalyst contracts with foreign countries, in July 2015 has completed the first set of export order production. Main features:

- High catalyst activity
- Good catalyst stability
- The amount of coking in the reaction process is small,
- High octane rating.

产品理化性质

Physical and Chemical Properties

牌号 Brand	YG-10
外形 Appearance	三叶草 Clover
规格, mm Size Diameter	Φ1.6
比表面积, m ² /g surface area	>180
堆密度, g/ml bulk density	0.75~0.78
耐压强度, N/cm Crush Strength	≤100
Pt, m%	0.23±0.01
Cl, m%	≥5.0

应用范围: 适用于 C5、C6 轻质烷烃, 在临氢条件下, 低温 120~170℃ 反应, 异构得高辛烷值的 C5、C6 产品。

Application: Applicable to C5, C6 light alkanes isomerization, in the presence of hydrogen, low temperature reaction temperature 120~170℃, isomerization C5, C6 products with enhanced Octane Number.



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产品包装: 专用不锈钢桶密封包装, 内衬封闭的铝箔袋, 130Kg/桶

Product packaging: special stainless-steel drum sealed, lined with closed aluminum foil bag, 130Kg/drum

储存、使用注意事项

- 注意防水、防潮, 严禁与其它化学品和烃类物质接触。
- 搬运时不得摔、滚铁桶
- 开工和再生应严格按 YG-10 催化剂使用说明操作, 必须在专业人员指导下进行。

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons.
- Do not drop or roll iron barrels during handling
- Start-up and regeneration should be strictly operated in accordance with the YG-10 catalyst instructions, and must be carried out under the guidance of professional personnel

另外, 我公司还加工生产新一代 PDI-3 载钯中温异构化催化剂, 已经在中石化连续使用 8 年多, 性价比达到国内同类产品领先水平。

In addition, our company has also processed and produced a new generation of PDI-3 palladium supported medium temperature isomerization catalyst, which has been used in Sinopec for more than 8 years, and the cost performance has reached the leading level of similar products in China.



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烷烃脱氢催化剂

Alkanes Dehydrogenation Catalyst



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LHB-01 丁烷脱氢连续再生催化剂

LHB-01 IsoButane Dehydrogenation with CCR

产品特点: LHB-01 催化剂是我司研制开发的新一代高活性流化床异丁烷脱氢催化剂, 具有以下特点:

- 载体强度高, 比表面积大;
- 催化剂积炭速率大幅度下降, 在相同反应苛刻度条件下, 催化剂积炭速率降低 20%以上;
- 保持催化剂良好的水热稳定性和优良的机械性能;
- 异丁烷转化率高, 异丁烯选择性高
- 催化剂消耗低

Product features: LHB-01 catalyst is a new generation of high activity Fluidized bed reactivation Iso-butane dehydrogenation catalyst developed by our company. It has the following characteristics:

- the strength of carrier is higher than Competing goods. And the surface area also is higher.
- Catalyst carbon deposition rate decreased significantly, under the same reaction severity conditions, catalyst carbon deposition rate decreased by more than 20%.
- Maintain good hydrothermal stability and excellent mechanical properties of the catalyst.
- Iso-butane conversion for one through is higher. And the Iso-butene selectivity is higher than competing goods.
- catalyst consumption is lower

产品理化性质

Physical and Chemical Properties

牌号 Brand	LHB-1
外观 Appearance	灰绿色粉末 Gray-green powder
堆积密度, kg/m ³ , Bulk Density	1100±200
粒度分布, w%, partical size distribution	> 150µm: <5.0%; <20µm: <5.0%
机械强度 (磨损指数) Mechanical strength (attrition index)	≤3.0
比表面积, m ² /g, Surface Area	110±10
异丁烯选择性, %Iso-butene selectivity	≥85
单程一次通过异丁烷转化率, % Iso-butane conversion one through	≥52
催化剂单耗, kg 催化剂/t 异丁烯 Catalyst consumption, Kg Cat./t Iso-butene	≤4.0



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应用范围: 流化床异丁烷脱氢装置, 催化剂连续再生.

Application: Fluidized bed reactivation Iso-butane dehydrogenation, Continuous catalyst regeneration.

产品包装: 专用铁桶密封包装, 内层使用双层塑料袋, 100Kg/桶。

Product packaging: special steel drum sealed packaging, the inner layer is double layer plastic bags, 100Kg/ drum.

储存、使用注意事项

- 注意防水、防潮, 严禁与其它化学品和烃类物质接触。
- 搬运时不得摔、滚铁桶
- 产品可以氧化态或还原态出厂
- 开工和再生应严格按 LHB-02 催化剂使用说明操作, 应在专业人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons.
- Do not drop or roll iron barrels during handling



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LHB-02 丙烷脱氢连续再生催化剂

LHB-02 Propane Dehydrogenation with CCR

产品特点: LHB-02 催化剂是我司研制开发的新一代高活性、高水热稳定性移动床丙烷脱氢催化剂，具有以下特点：

- 载体强度高，比表面积大
- 催化剂积炭速率大幅度下降，在相同反应苛刻度条件下，催化剂积炭速率降低 20%以上；
- 保持催化剂良好的水热稳定性、持氯能力和优良的机械性能；
- 铂含量目前催化剂中最低的，大大降低催化剂成本；

Product features: LHB-02 catalyst is a new generation of high activity and high hydrothermal stability moving-burden bed reactivation Propane dehydrogenation catalyst developed by our company. It has the following characteristics:

- the strength of carrier is higher than Competing goods. And the surface area also is higher.
- Catalyst carbon deposition rate decreased significantly, under the same reaction severity conditions, catalyst carbon deposition rate decreased by more than 20%.
- Maintain good hydrothermal stability, chlorine holding capacity and excellent mechanical properties of the catalyst.
- Platinum content is the lowest in the current catalyst, greatly reducing the catalyst cost.

产品理化性质

Physical and Chemical Properties

牌号 Brand	LHB-2
外形 Appearance	灰黑色球状
平均床层堆密度, g/ml, ABD	0.58-0.68
耐压强度, N/cm Crush Strength	≥40
Pt, m%	0.28-0.32
Cl, m%	≥1.48
Sn, m%	0.138-0.182
K, m%	1.08-1.22
热失重, m%, LOI	0.38-1.12

应用范围: 移动床丙烷脱氢装置，催化剂连续再生.

Application: moving-burden bed reactivation Propane dehydrogenation plant(PDH), Continuous catalyst regeneration.



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产品包装: 专用铁桶密封包装, 内层使用双层塑料袋, 100Kg/桶。

Product packaging: special steel drum sealed packaging, the inner layer is double layer plastic bags, 100Kg/ drum.

储存、使用注意事项

- 注意防水、防潮, 严禁与其它化学品和烃类物质接触。
- 搬运时不得摔、滚铁桶
- 产品可以氧化态或还原态出厂
- 开工和再生应严格按 LHB-02 催化剂使用说明操作, 应在专业人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, and strictly prohibit contact with other chemicals and hydrocarbons.
- Do not drop or roll iron barrels during handling
- Products can be oxidized state or reduced state factory
- Start-up and regeneration should be strictly operated in accordance with the instructions for the use of LHB-02 catalyst, and should be carried out under the guidance of professional personnel



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DH-31 固定床丁烷脱氢催化剂

DH-31 Fixed Bed Isobutane Dehydrogenation



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环保催化剂

Enviromental Adsorbent



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DSZ-01-10 型脱硫剂

DSZ-01-10 Sulfur Removal Adsorbent

产品特点: DSZ-01-10 型脱硫剂是一种新型的氧化锌脱硫剂，以高纯度氧化锌为主要原料，具有以下特点：

- 很好的低温脱硫性能
- 硫容高
- 强度好、磨耗低、耐水性能好、床层压力降
- 寿命长
- 适应性强

Product features: DSZ-01-10 type desulfurizer is a new type of zinc oxide desulfurizer, with high purity zinc oxide as the main raw material, with the following characteristics:

- Low temperature desulfurization performance
- High sulfur tolerant capacity
- High strength, low attrition rate, water tolerant, low bed pressure drop
- Longer Adsorbent life time
- high flexibility to feed stock

产品理化性质

Physical and Chemical Properties

牌号 Brand	DSZ-01-10
外形 Appearance	三叶草形 Clover
规格, mm Size Spec.	Φ4×6-12
孔容, ml/g Pore Volume	0.50-0.60
比表面积, m ² /g Surface Area	≥180
堆密度, g/ml Bulk Density	1.10-1.30
耐压强度, N/cm Anti-Crush Strength	≥50
磨耗率, m% Attrition rate	≤4.5
ZnO m%	≥95
穿透硫容, m% Breakthrough Sulfur Capacity	≥25
饱和硫容, m% Saturated Sulfur Limit	≥35



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应用范围: 适用于天然气、油田气、炼长气及轻油原料中杂质硫的脱除; 合成氨、甲醇、制氢、有机合成等工业原料气(油)的脱硫净化工艺。对含有较复杂成分的有机硫化物, DSZ-01-10 型氧化锌脱硫剂可与镍钨加氢精制催化剂联用, DSZ-01-10 型脱硫剂还可作为低变催化剂上部的保护剂, 可使出口硫含量降到 0.1ppm 以下。

Application: It is suitable for the removal of impurity sulfur in natural gas, oil field gas, long chain gas and light oil raw materials. Desulfurization and purification process of industrial raw gas (oil) such as synthetic ammonia, methanol, hydrogen production and organic synthesis. For organic sulfides containing more complex components, DSZ-01-10 type zinc oxide desulfurizer can be combined with nickel-tungsten hydrorefining catalyst, DSZ-01-10 type desulfurizer can also be used as a protective agent on the upper part of the low-variation catalyst, which can reduce the export sulfur content to less than 0.1ppm

产品包装: 专用铁桶包装, 内套双层塑料袋, 净重 140Kg/桶

Packaging: Special Steel drum packing, inner double plastic bag, net weight 140Kg/ drum

储存、使用注意事项

- 注意防水、防潮, 防止其它化学品污染
- 搬运时不得摔、滚铁桶, 装填时避免催化剂高空坠落
- 开工、再生时应严格按 DSZ-01-10 催化剂使用说明操作, 必要时应在专业技术人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, to prevent other chemical pollution
- Do not drop or roll iron drums during handling, and avoid catalyst falling from high altitude during loading
- Start, regeneration should be strictly in accordance with the DSZ-01-10 catalyst instructions, if necessary, should be carried out under the guidance of professional and technical personnel



DS10-100 脱硫剂

DS10-100 Sulfur Removal Adsorbent

产品特点: DS10-100 脱硫吸附剂具有高硫容、高活性、高强度的特性,即使在较苛刻条件下,也能保持很高的活性与硫容,并具有耐高水汽比的特性,性能达到并超过进口同类产品水平。具有以下主要特点:

- 催化剂活性高,硫容高
- 催化剂稳定性好
- 机械强度高

Product features: DS10-100 desulfurizing adsorbent has the characteristics of high sulfur tolerant capacity, high activity and high strength, even under harsh conditions, it can maintain high activity and sulfur tolerant capacity, and has the characteristics of high-water vapor ratio, as well as the performance reaches and exceeds the level of imported similar products. It has the following characteristics:

- High catalyst activity, high sulfur capacity
- Good catalyst stability
- High mechanical strength

产品理化性质

Physical and Chemical Properties

牌号 Brand	DS10-100
外形 Appearance	圆柱
规格, mm Size Spec.	Φ3-5
比表面积, m ² /g Surface Area	>50
堆密度, g/ml Bulk Density	1.0~1.2
耐压强度, N/cm Anti-Crush Strength	≤50
穿透硫容, m% Breakthrough Sulfur Capacity	≥10



GTAS-41 脱砷剂

GTAS-41 Arsenic removal agent

产品特点: 活性高, 满足加氢剂对原料含砷 ≤ 200 ppb、重整剂对原料含砷 ≤ 1 ppb 的要求。具有以下特点:

- 容砷量大, 可达 40%
- 强度高, 抗意外操作事故能力强
- 再生性能好, 活性可恢复到新鲜剂水平

Product features: high activity, can meet the hydrogenation performance requirement for raw materials containing arsenic ≤ 200 ppb, Reforming agent for raw materials containing arsenic ≤ 1 ppb requirements. It has the following characteristics:

- High arsenic tolerant capacity, up to 40%
- High strength, strong ability to resist accidental operation
- Good regeneration performance, the activity can be restored to the level of fresh agent

产品理化性质:

Physical and Chemical Properties

牌号 Brand	GTAS-41 脱砷剂
外形 Appearance	圆柱条型 Cylinder
尺寸, mm Size	D1.5-2.0
比表面积, m ² /g Surface Area	≥ 180
耐压强度, N/cm Anti Crush Strength	≥ 200
孔容, ml/g Pore volume	≥ 0.52
堆密度, g/ml Bulk Density	0.63-0.68
活性组分 Active Components Content	

应用范围:

- 适用于: 汽油、煤油、柴油及其混合馏分的加氢脱砷
- 适合于含砷量高于 200ppb 的二次加工油的加氢精制过程, 以保护加氢催化剂
- 与重整预加氢催化剂匹配使用, 保护重整催化剂
- 用于生产乙烯的石脑油砷含量较高时, 可用 GTAS-41 进行预脱砷, 保护下游的贵金属催化剂

Application:

- Suitable for the hydrogenation of gasoline, kerosene, diesel and their mixed fractions.



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- Suitable for the hydrogenation of secondary processing oil with arsenic content higher than 200ppb to protect the hydrogenation catalyst
- Match with reforming pre-hydrogenation catalyst to protect reforming catalyst
- When the arsenic content of naphtha used for ethylene production is high, GTAS-41 can be used for pre-arsenic removal to protect the downstream precious metal catalyst

产品包装: 专用铁桶包装, 内套双层塑料袋, 净重 120Kg/桶;

专用纸桶包装, 内套双层塑料袋, 净重 25Kg/桶

Product packaging: Special iron drum packing, inner double plastic bag, net weight 120Kg/ drum
Special paper drum packing, inner double plastic bag, net weight 25Kg/ drum

储存、使用注意事项

- 注意防水、防潮, 防止其它化学品污染
- 搬运时不得摔滚包装桶, 装填时避免催化剂高空坠落
- 产品以氧化态出厂, 使用前需进行预硫化处理
- 开工和再生时应严格按 GTAS-41 脱砷剂使用说明操作, 必要时应在专业技术人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, to prevent other chemical contamination
- Do not throwing/rolling the packaging drum during handling, and avoid catalyst falling from high altitude during loading
- The product leaves the factory in oxidized state and needs to be pre-vulcanized before use
- Operation and regeneration should be strictly in accordance with GTAS-41 dechlorinator instructions, if necessary, should be carried out under the guidance of professional and technical personnel.



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DCL-01-10 型脱氯剂

DCL-01-10 Chloride Removal Adsorbent

产品特点: DCL-01-10 型脱氯剂是一种新的脱氯剂，它不仅具有国内其它脱氯剂的共同特点，而且在相同的条件下，其净化度和氯容均比国内其它脱氯剂高 1.5-2 倍，并具有与氯化氢快速反应的特点和足够固定氯离子的能力。

Product Features: DCL-01-10 dechlorination agent is a new dechlorination agent, it not only has the common characteristics of other domestic dechlorination agents, but also under the same conditions, its purification degree and chlorine capacity are 1.5-2 times higher than other domestic dechlorination agents, and has the characteristics of rapid reaction with hydrogen chloride and the ability to fix chloride ions.

产品理化性质

Physical and Chemical Properties

牌号 Brand	DCL-01-10
外形 Appearance	圆柱条形 Cylinder
尺寸, mm Size	Φ3×5-10
比表面积, m ² /g Surface Area	≥60
孔容, ml/g Pore Volume	0.75-0.80
堆密度, g/ml Bulk Density	0.75-0.80
耐压强度, N/cm Crush Strength	≥100
活性组分, m% Active Components Content	≥30
穿透氯容, gCl/100g Breakthrough Chloride Capacity	>32 (标准评价温度 300℃)

应用范围: DCL-01-10 型脱氯剂适应性强，应用范围广，既可在不同的温度及压力下使用，又可在较为广泛的气源中进行脱氯。除了用于氢气、氮气、合成气，一氧化碳、二氧化碳和石脑油等气相中脱氯，又可以用于含甲苯等有机杂质原料气中氯的脱除，尤其适合作为蒸汽转化，低温变换和甲烷化等催化剂的保护剂。

Application: DCL-01-10 dechlorination adsorbent is a new dechlorination product, it not only has the common characteristics of other dechlorination agents in China, but also the application range. GTL-C dechlorination agent has strong adaptability and wide application range, which can be used at different temperatures and pressures, and can be dechlorinated in a wide range of air sources. In addition to hydrogen, nitrogen, syngas, carbon monoxide, carbon dioxide and naphtha in the gas phase of dechlorination, but also can be used to contain toluene and other organic impurities in the raw gas.



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chlorine removal, especially suitable for steam conversion, low temperature conversion and methanation catalyst protective agent

产品包装: ○专用铁桶包装, 内套双层塑料袋, 净重 140Kg/桶

○专用纸桶包装, 内套双层塑料袋, 净重 30Kg/桶

Product packaging:

- Special iron drum packing, inner double plastic bag, net weight 140Kg/ drum
- Paper drum packing, inner double plastic bag, net weight 30Kg/ drum

储存、使用注意事项

- 注意防水、防潮, 防止其它化学品污染
- 搬运时不得摔滚纸桶或铁桶, 装填时避免催化剂高空坠落
- 开工时应严格按 DCL-01-10 型脱氯剂使用说明操作, 必要时应在专业技术人员指导下进行

Precautions for storage and use

- Pay attention to waterproof, moisture-proof, to prevent other chemical pollution
- Do not roll paper or iron drums during handling, and avoid catalyst falling from high altitude during loading
- The operation should be strictly in accordance with the DCL-01-10 type dechlorinator instructions, if necessary, should be carried out under the guidance of professional and technical personnel



低温脱硝催化剂（无钒）

Low Temperature Denitration Catalyst (Vanad-free)

产品特点：低温脱硝催化剂是以活性 TiO_2 为载体，以稀土元素和过渡金属钨镍为活性组份，采用先进制备方法生产的新一代中温脱硝催化剂。

主要特点：

- 催化剂活性组分为稀土，环境友好；失效后无需危废处理，保证环境安全；
- 储氨功能，减少氨逃逸；协同脱除 CO 、 HC 、 Hg 能力；
- SO_2/SO_3 转化率 $< 0.4\%$ ，抗中毒能力强；失活后可再生利用，降低运行成本；
- 中毒后可再生；

Product features: The low-temperature denitrification catalyst is a new generation of medium temperature denitrification catalyst produced by advanced preparation method with active TiO_2 as the carrier and rare earth elements and transition metal tungsten nickel as the active component.

Main features:

- Catalyst active group is divided into rare earth, environmentally friendly; There is no need to treat hazardous waste after deactivation which can ensure environmental safety;
- Ammonia storage function, reduce ammonia escape; Synergistic removal of CO , HC , Hg ;
- SO_2/SO_3 conversion rate $< 0.4\%$, strong anti-poisoning ability; Renewable use after deactivation, reduced operating costs;
- Regeneration after deactivation

产品理化性质

Physical and Chemical Properties

项目 Item	指标 Number
轴向抗压强度, MPa Axis Anti-Crush Strength	≥ 2.5
径向抗压强度, MPa Radial Crush Strength	≥ 0.8
磨损强度（未硬化）, %/kg Attrition Strength (no hardening)	≤ 0.15
长度, mm Length	400~1400
脱硝效率, w% Nitro Removal Rate	≥ 90
SO_2/SO_3 转化率, % Conversion Rate	≤ 0.4
V_2O_5 含量, wt% Content	不得检出 Not detectable
化学寿命, h Chemical Life time	$\geq 24000^*$



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应用范围: 广泛应用于化工/石化、玻璃/陶瓷、钢铁/焦化、水泥/造纸、垃圾焚烧、不锈钢酸洗、草酸生产线、硝酸生产线、轮船/汽车、工业锅（窑）炉、其他工业企业。

Application: Widely used in chemical/petrochemical, glass/ceramics, steel/coking, cement/paper, waste incineration, stainless steel acid treatment, oxalic acid production line, nitric acid production line, ship/automobile, industrial pot (kiln) furnace, another industrial segment.

产品包装: 根据原设计和实际情况做大型模块包装，模块两边开口，催化剂单元暴露于空气中，因此模块应防止被雨水等淋湿。模块箱应完全包裹在塑料薄膜中，用胶带密封，然后坚固地捆在木制托盘上。

Packaging: According to the original design and the actual situation, the large module packaging is made. The two sides of the module are open, and the catalyst unit is exposed to the air, so the module should be prevented from being wet by rain; The module box should be completely wrapped in plastic film, sealed with tape, and then securely strapped to a wooden pallet.

储存、使用注意事项: 蜂窝式脱硝催化剂模块是以水平方向运输的，在反应器里安装时是垂直方向。存放在运输托盘上的模块必须包装良好，外面的塑料薄膜不可拆除。但塑料薄膜只可以在短时间内防护催化剂不会受潮。当催化剂模块被暂时放置在户外时应遮盖合适的聚乙烯薄膜或防水帆布。

模块应储藏在室内以避免被雨淋湿，应避免接触油类制品及其它有破坏作用的化学物品。模块应尽可能的保持干燥状态。如果在催化剂包装内可以确保干燥状态，则催化剂模块可以储存在施工现场的集装箱或临时性仓库内。催化剂模块的叠放层数不能超过两层，模块须储存在稳固及平坦的地面

Storage and Use Precautions: Cellular denitration catalyst modules are transported horizontally and installed vertically in the reactor. Modules stored on transport pallets must be well packed and the plastic film outside cannot be removed. However, the plastic film can only protect the catalyst from moisture for a short time. When the catalyst module is temporarily placed outdoors, it should be covered with suitable polyethylene film or waterproof canvas.

Modules should be stored indoors to avoid being wet by rain, and should avoid contact with oil products and other destructive chemicals. The module should be kept as dry as possible. If dry conditions can be ensured in the catalyst packaging, the catalyst modules can be stored in containers or temporary warehouses on the construction site. The number of layers of the catalyst module should not exceed two layers, and the module should be stored on a stable and flat ground