

# Floating Marine Hose

Powering Marine Worldwide



GETSAF MARINE  
HOSE CATALOGS



OPERATING CONDITION  
SURVEY FORM - GETSAF

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## 公司简介 | Company Profile



盖茨流体科技（日照）有限公司是一家专注于海洋软管研发与智能制造的企业。公司坐落于日照市北经济技术开发区，引进并采用日本 Toyokawa 的海洋软管制造技术及专业生产设备，建立了涵盖产品研发、生产制造、质量检测与销售服务的全链条一体化体系，可为国内外客户提供专业、高效的海洋流体输送解决方案。

公司产品已出口至东南亚、中东、欧洲、非洲及美洲等多个国家和地区，广泛服务于全球石油公司、海洋工程企业及海上运营商。

盖茨流体科技（日照）有限公司隶属于青橡集团，是集团布局海洋软管产业的核心企业。母公司青岛青橡橡胶有限公司创立于2008年，坐落于青岛西海岸新区，是国家高新技术企业，并获评青岛市企业技术中心。集团拥有十余年流体输送软管研发与制造经验，建有占地约130,000平方米的现代化生产基地，员工总数超过700人，并配套建设高标准软管研发与检测中心，具备从原材料检验、产品设计、生产制造到成品测试的全过程质量控制能力。

在技术研发方面，集团与北京科技大学、青岛科技大学持续开展产学研合作，联合推进海洋软管材料、结构及制造工艺的研发与创新；同时在马耳他设立欧洲技术中心，为全球客户提供技术支持与本地化服务。

Getsaf Marine (Rizhao) Co., Ltd. is an enterprise dedicated to the R&D and intelligent manufacturing of marine hoses. Located in the Rizhao North Economic and Technological Development Zone, the company utilizes marine hose manufacturing technology and specialized equipment imported from Japan's Toyokawa. It has established an integrated, full-chain system covering product R&D, manufacturing, quality inspection, and sales services, enabling it to provide professional and efficient marine fluid transfer solutions to domestic and international clients.

The company's products have been exported to numerous countries and regions across Southeast Asia, the Middle East, Europe, Africa, and the Americas, serving global oil companies, marine engineering firms, and offshore operators.

Getsaf Marine (Rizhao) Co., Ltd. is a member of QINGFLEX Group and serves as the Group's core enterprise for marine hose business. Its parent company, Qingdao Qingflex Hose Factory was founded in 2008 and is located in the Qingdao West Coast New Area; it is recognized as a National High-Tech Enterprise and a designated Qingdao Enterprise Technology Center. The Group possesses over a decade of experience in the R&D and manufacturing of fluid transfer hoses. It operates a modern production base covering approximately 130,000 square meters and employs a workforce of over 700 people. Supported by a high-standard hose R&D and testing center, the Group maintains comprehensive quality control capabilities spanning the entire process—from raw material inspection, product design, and manufacturing to finished product testing.

Regarding technical R&D, the Group maintains ongoing industry-academia-research collaborations with the University of Science and Technology Beijing and Qingdao University of Science and Technology to jointly advance innovation in marine hose materials, structures, and manufacturing processes. Additionally, it has established a European Technology Center in Malta to provide technical support and localized services to global customers.





## Part 1 Floating Marine Hose

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# FPSO Floating Hose

浮式生产储卸油装置漂浮软管



FPSO（浮式生产储油卸油装置）是海上油气田开发的核心设施，串靠（串联）装载是FPSO向穿梭油轮转运原油的主流作业方式。GETSAF MARINE专为FPSO串靠卸油工况研发的漂浮软管，可在复杂海况下实现安全、高效、连续的液货传输，全面适配各类FPSO/FSO/FSU与穿梭油轮的作业需求。

FPSO (Floating Production Storage and Offloading) is the core facility for offshore oil and gas field development, and tandem loading is one of the mainstream operation methods for FPSO to transfer crude oil to shuttle tankers. GETSAF MARINE's floating hoses, specially developed for FPSO tandem offloading conditions, enable safe, efficient and continuous cargo transfer under complex sea conditions, fully adapting to the operational requirements of various FPSO/FSO/FSU and shuttle tankers.

# SPM-Floating Hose Systems

单点系泊系统漂浮软管



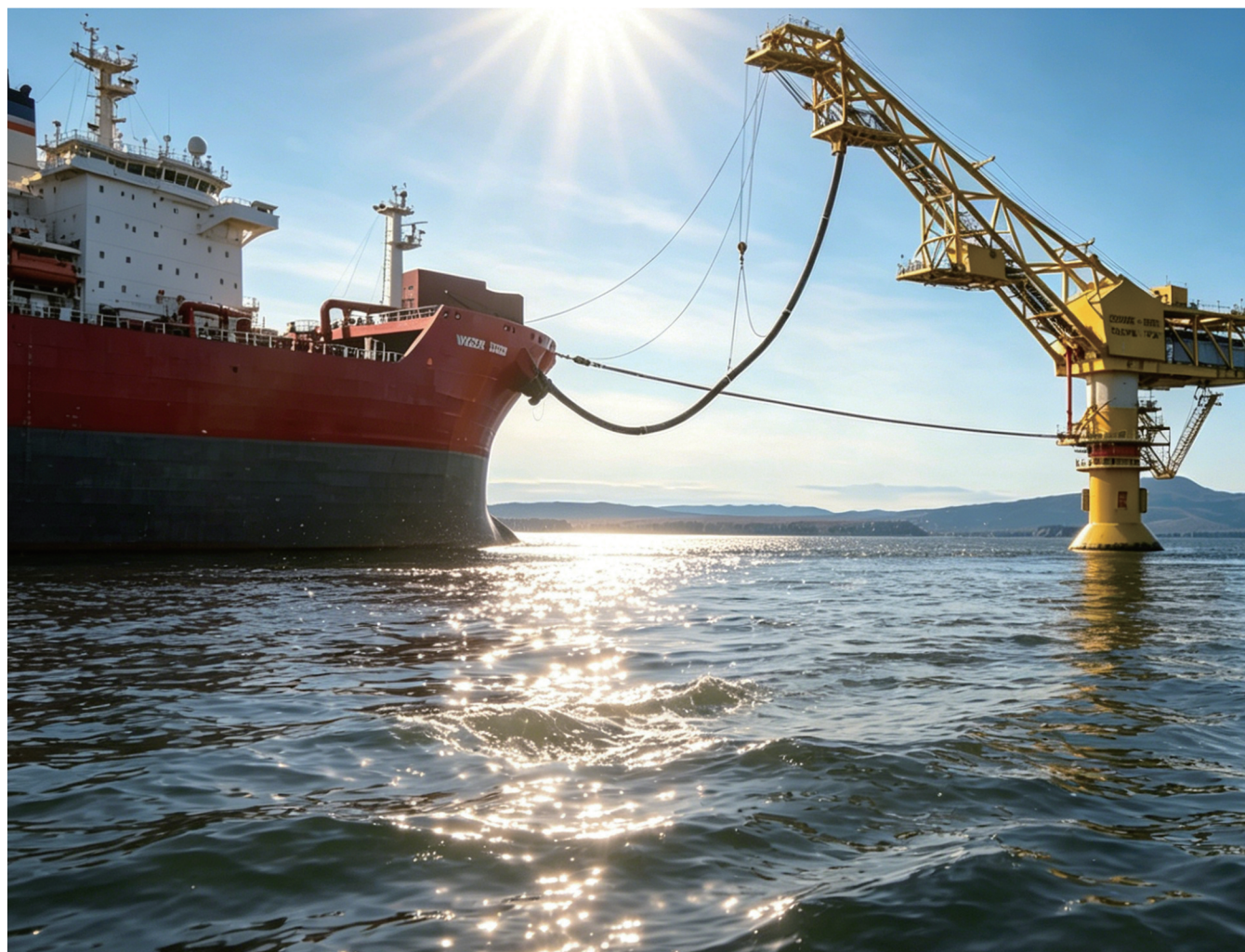
单点系泊（SPM, Single Point Mooring）是离岸油气田开发的核心枢纽，广泛用于 FPSO/FSO/ 储油轮与穿梭油轮之间的液货转运，是深水、远海油田的主流卸油方案。GETSAF MARINE 为 SPM 系统提供全系列漂浮软管与海底软管，覆盖从海床到油轮的完整输油链路，适配 CALM（悬链锚腿系泊）、SALM（单锚腿系泊）等各类 SPM 系统。

Single Point Mooring (SPM) is the core hub of offshore oil and gas field development, widely used for cargo transfer between FPSO/FSO/storage tankers and shuttle tankers, and is the mainstream offloading solution for deep-water and offshore oil fields. GETSAF MARINE provides a full range of floating hoses and submarine hoses for SPM systems, covering the complete oil transmission pipeline from seabed to tanker, adapting to various SPM systems such as CALM (Catenary Anchor Leg Mooring), SALM (Single Anchor Leg Mooring), etc.



# SPM Tower Loading System

SPM 塔式悬链装卸系统



SPM 塔式系泊悬链装卸系统是浅水、恶劣海况区域的主流卸油方案，通过固定于海床的钢结构塔架系泊穿梭油轮，替代传统浮筒式 SPM，抗浪性、稳定性更强，尤其适用于近岸、浅水油气田。GETSAF MARINE 专为 SPM Tower 工况研发的卸油软管，完美适配塔式系泊的动态作业需求，实现安全、高效的液货传输。

SPM Tower Mooring System (TMS) is the mainstream offloading solution for shallow water and harsh sea conditions. By mooring shuttle tankers with a steel structure tower fixed on the seabed, it replaces the traditional buoy-type SPM, with stronger wave resistance and stability, especially suitable for nearshore and shallow water oil and gas fields. GETSAF MARINE's offloading hoses, specially developed for SPM Tower working conditions, perfectly adapt to the dynamic operation requirements of tower mooring, achieving safe and efficient cargo transfer.

# Reeling Hose

卷轴软管



卷轴软管是GETSAF MARINE专为海上油气高效作业研发的柔性输送设备，依托可卷绕收纳的核心特性，搭配专用卷轴，实现软管的快速部署、回收与规范收纳

The reel hose is a flexible conveying device developed by GETSAF MARINE specifically for efficient offshore oil and gas operations. Leveraging its core feature of being able to be wound and stored, and paired with a dedicated reel, it enables rapid deployment, retrieval, and standardized storage of the hose.



# Lantern-style Subsea Configuration

水下灯笼式构型

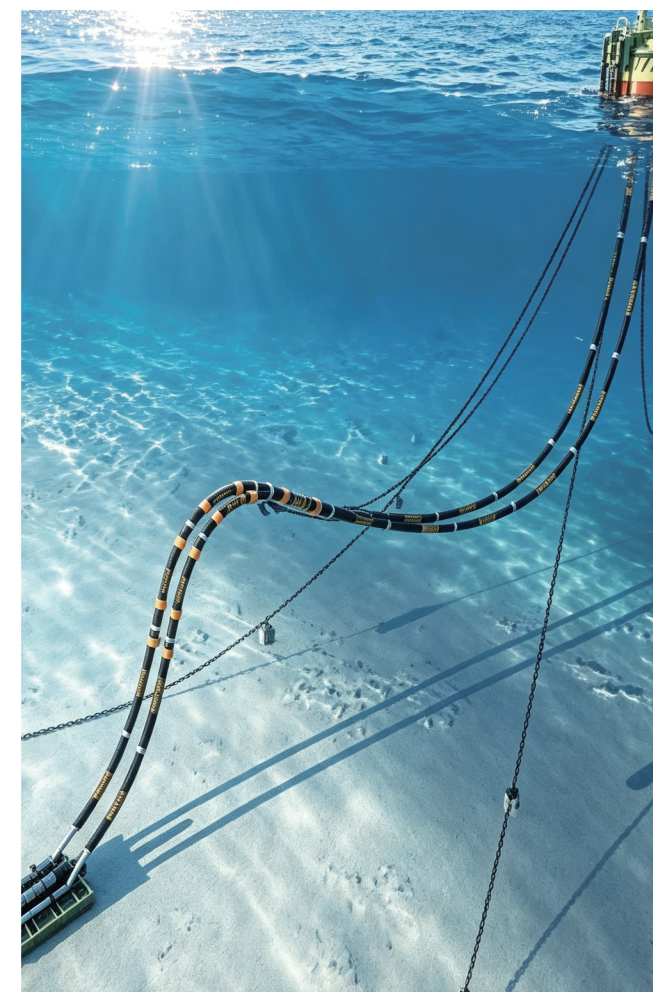
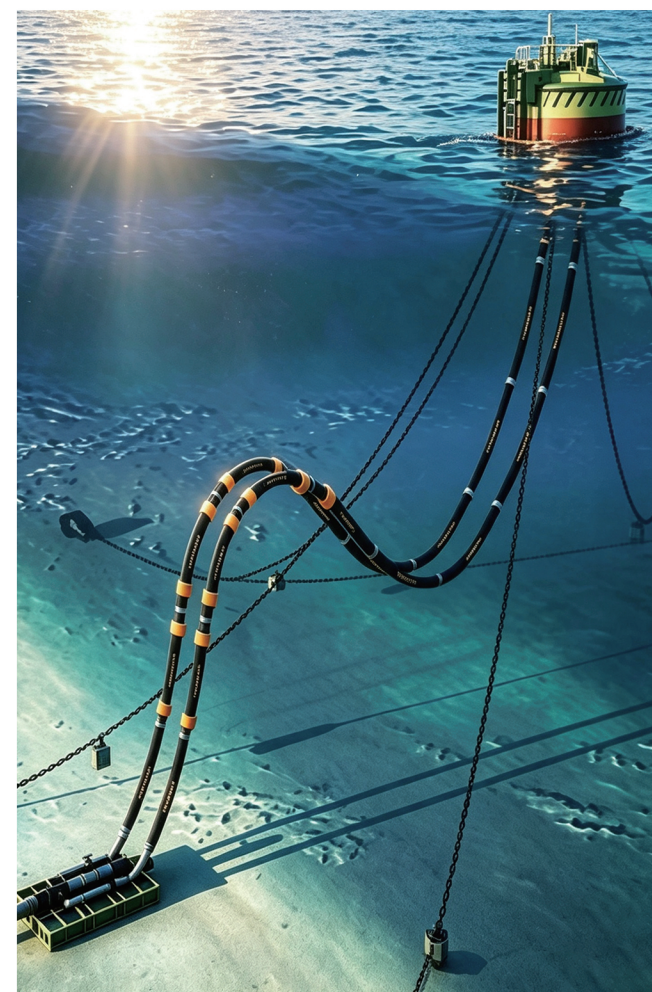


灯笼式水下输油构型是现代单点系泊系统的核心技术，专为深水恶劣海况设计，凭借优异的运动适应性、高可靠性与模块化维护优势，为海底输油提供柔性高效的解决方案，全面适配深水油气开发需求。

The lantern-style subsea configuration is a core technology of modern single point mooring systems, designed for deepwater harsh sea conditions. With excellent motion adaptability, high reliability and modular maintenance advantages, it provides a flexible and efficient solution for subsea oil transfer, fully meeting the needs of deepwater oil & gas development.

# Steep S and Lazy S are classic subsea hose

水下陡 S 型与懒 S 型



水下陡 S 型与懒 S 型是单点系泊系统的经典水下软管构型。陡 S 型布局紧凑、抗水平位移能力强，适配深水作业；懒 S 型形态平缓、抗垂直升沉性能优异，适用于中等水深，为不同海况下的海底输油提供可靠解决方案。

Steep S and Lazy S are classic subsea hose configurations for Single Point Mooring (SPM) systems. The Steep S features a compact layout with strong horizontal displacement resistance, ideal for deepwater operations; the Lazy S has a gentle profile with excellent vertical heave adaptability, suitable for medium water depths, delivering reliable solutions for subsea oil transfer under various sea conditions.



## Getsaf 海上漂浮式油气输送专用软管

Getsaf Marine Floating Hose for Oil & Gas Transportation

Getsaf漂浮软管严格按照国际GMPHOM 2009标准设计与生产。  
针对远洋复杂海况与浮式作业需求，提供定制化流体输送整体解决方案。

Manufactured in full compliance with GMPHOM 2009. We offer tailored fluid transfer solutions for harsh offshore environments.

### 核心性能优势 | Core Performance Advantages

支持原油、天然气、LPG多介质  
稳定输送，覆盖全场景海事作业

Compatible with crude oil,  
natural gas and LPG, ideal for  
full-scenario marine operations

专用内衬层可抵御高浓度芳  
香烃介质 (≤60%)

A specialized inner lining layer  
provides resistance against  
high-concentration aromatic  
hydrocarbon media (≤60%).

一体式耐油结构设计，无需加装  
过渡层，适配各类油性流体

Integrated oil-resistant structure  
eliminates the need for transition  
layers for oily media

外覆层具备超强抗紫外线、耐  
磨损、抗撕裂性能，延长海上  
使用寿命

Outer cover features superior  
UV, abrasion and tear resistance  
for long offshore service life



#### 双骨架安全结构 海事级冗余防护设计

Getsaf提供单骨架与双骨架两大系列漂浮软管，其中双骨架产品采用双重独立承压结构，是高安全等级海事工程的首选方案。

主骨架层发生故障时，次级骨架可瞬间接管全部压力负载，确保输送系统连续运行，彻底杜绝海洋泄漏风险。可选配智能泄漏监测系统，实现故障提前预警。

Getsaf offers floating hoses with single-carriage and double-carriage structures. The double-carriage hose adopts two independent pressure-bearing layers, which is the best choice for high-safety offshore engineering projects.

When the primary carriage layer malfunctions, the secondary carriage layer will instantly bear all system pressure loads. It ensures continuous operation of the transmission system and completely avoids offshore leakage hazards. Customers can equip an intelligent leakage monitoring system to achieve active fault early warning.



GMPHOM  
2009

产品严格遵守 **GMPHOM 2009** 国际海洋软管标准生产

Manufactured in strict accordance with GMPHOM 2009 International Standard



海洋漂浮软管-通用配置介绍

Marine Floating Hose - General Configuration Introduction

核心结构配置 | Core Structure Configuration

**单双骨架结构：**GETSAF 漂浮输油管系列包含单骨架和双骨架结构，适用于水下，悬链及漂浮。

**Single and Double Carcass Structures:** GETSAF floating oil hoses features both single -carcass and double-carcass structures, suitable for subsea, catenary, and floating applications.

产品分类应用 | Product Classification



漂浮软管（水上应用）Floating Hoses

|           |                                       |
|-----------|---------------------------------------|
| 围栏管       | Tanker Rail Hose                      |
| 尾管        | Tail Hose                             |
| 变径管       | Reducer Hose                          |
| 主管        | Mainline Hose                         |
| 外覆聚氨酯涂层软管 | Polyurethane-Coated Hose              |
| 一端增强半漂浮管  | One End Reinforced Half Floating Hose |
| 卷轴软管      | Reel Hose                             |
| 悬链软管      | SPM Tower Loading Hose                |



水下软管（海底应用）Submarine Hoses

|             |                                         |
|-------------|-----------------------------------------|
| 带浮体环一端增强管   | One End Reinforced with Float Collar    |
| 不带浮体环一段增强管  | One End Reinforced without Float Collar |
| 带浮体环主管      | Mainline Hose with Float Collar         |
| 不带浮体环主管     | Mainline Hose without Float Collar      |
| 全增强管        | Fully Reinforced Hose                   |
| 灯笼式/懒S型/陡S型 | Lantern / Lazy-S / Steep-S              |

标准规格参数 | Standard Specifications

| 内径<br>Inner diameter |     | 额定工作压力<br>Rated working pressure | 长度<br>Length       | 安全系数<br>Safety factor |
|----------------------|-----|----------------------------------|--------------------|-----------------------|
| inch                 | mm  | bar                              | m                  | x: x                  |
| 4                    | 102 | 15/19/21                         | 9.1/10.7/11.8/12.2 | 5: 1                  |
| 6                    | 150 |                                  |                    | 5: 1                  |
| 8                    | 200 |                                  |                    | 5: 1                  |
| 10                   | 250 |                                  |                    | 5: 1                  |
| 12                   | 300 |                                  |                    | 5: 1                  |
| 16                   | 400 |                                  |                    | 5: 1                  |
| 20                   | 500 |                                  |                    | 5: 1                  |
| 24                   | 600 |                                  |                    | 5: 1                  |

|                                                                                                                                          |                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| 操作压力<br>Allowable Operating Pressure                                                                                                     | <b>-0.85 bar (25 HG) 真空</b><br>-0.85 bar (25 HG) Vacuum                                    |
| 最小弯曲半径<br>Minimum Bending Radius                                                                                                         | <b>漂浮管（围栏管除外）：内径的6倍</b><br>Floating Hose (Except for tanker rail hose): 6xNominal Diameter |
| 最小弯曲半径<br>Minimum Bending Radius                                                                                                         | <b>水下管和围栏管：内径的4倍</b><br>Submarine Hose&Tanker Rail Hose: 4xNominal Diameter                |
| 流速<br>Flow Velocity                                                                                                                      | <b>21m/s (70ft/s)</b><br>21m/s (70ft/s)                                                    |
| 介质<br>Fluid                                                                                                                              | <b>原油、气态天然气、液态石油产品</b><br>Crude Oil,Natural Gas,liquid petroleum products                  |
| 最大芳香烃含量<br>Maximum Aromatic Content                                                                                                      | <b>60%</b><br>60%                                                                          |
| 介质温度<br>Fluid Temperature                                                                                                                | <b>-20°C~+82°C (-4°F~+180°F)</b><br>-20°C~+82°C (-4°F~+180°F)                              |
| 环境温度<br>Ambient Temperature                                                                                                              | <b>-29°C~+52°C (-20°F~+125°F)</b><br>-29°C~+52°C (-20°F~+125°F)                            |
| 对接头和法兰的外露内表面和外表面，包括法兰面的保护<br>Protection of the exposed internal and external surfaces of joints and flanges, including the flange faces. | <b>镀锌</b><br>Galvanizing                                                                   |
| 接头和法兰质检的焊缝检查<br>Weld Inspection for Joints and Flanges (Quality Control)                                                                 | <b>按照GMPHOM 2009进行射线检测</b><br>Perform radiographic testing in accordance with GMPHOM 2009. |



海上LPG漂浮/水下软管

Offshore LPG Floating & Submarine Hose

GMPHOM 2009 Compliant Solution for Offshore LPG Transfer Systems



OFFSHORE LPG TRANSFER SYSTEM

产品概述 | Product Overview

GETSAF 海上 LPG

漂浮及水下软管面向海上液化石油气转运工况开发，适用于 LPG 终端、浮式储存单元、船对船、船岸及 SPM/CALM 浮筒管线系统。

软管采用耐 LPG

内衬、低渗透结构、动态增强层和阻燃外胶层设计，兼顾介质兼容性、气体渗透控制、弯曲疲劳、端部载荷和长期海况运行可靠性。

GETSAF Offshore LPG Floating & Submarine Hose is engineered for offshore LPG transfer duties, including LPG terminals, floating storage units, STS, ship-to-shore and SPM/CALM hose strings.

The construction combines an LPG-resistant liner, low-permeation layers, dynamic reinforcement and a flame-retardant cover to support medium compatibility, gas-permeation control, bending fatigue resistance, end-load performance and long-term marine reliability.

产品特点 | Product Features

|                                                                                                                        |                              |                                                                                                  |                                     |
|------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>LPG耐气内胶层</b>                                                                                                        | <b>LPG Resistant Liner</b>   | <b>阻燃外胶层设计</b>                                                                                   | <b>Flame-Retardant Cover</b>        |
| 适配丙烷、丁烷、丙烯及 LPG 混合物，降低气体渗透。<br>Compatible with propane, butane, propylene and LPG mixtureswith reduced gas permeation. |                              | 外层阻燃橡胶兼顾海水、臭氧、紫外和甲板暴露环境。<br>Flame-retardant cover resists seawater, ozone, UV and deck exposure. |                                     |
| <b>低渗透结构</b>                                                                                                           | <b>Low-Permeation Design</b> | <b>海上动态适应</b>                                                                                    | <b>Offshore Dynamic Performance</b> |
| 帮助降低层间气体积聚风险，提升长期稳定性。<br>Helps reduce gas accumulation inside hose layers for stable service.                          |                              | 适应波浪、船舶运动、端部拉力和循环弯曲。<br>Designed for wave motion, vessel movement, end loads and cyclic bending. |                                     |

技术参数 | Technical Parameters

|                            |                                                                                                                           |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 软管类型Hose Type              | 漂浮/水下LPG管Floating / Submarine Offshore LPG Hose                                                                           |
| 内径Inside Diameter          | 6" - 24"                                                                                                                  |
| 额定工作压力Working Pressure     | 额定压力最高 50 bar；更高压力按项目设计和软管内径确定<br>Rated pressure up to 50 bar; higher pressure rating by project design and hose diameter |
| 温度范围Temperature            | 约 -50 deg C 至 +70 deg C Approx. -50 deg C to +70 deg C                                                                    |
| 骨架类型Carcass Type           | 单骨架/双骨架 Single Carcass / Double Carcass                                                                                   |
| 长度Length                   | 最高可达12.2米（40英尺）Up to 12.2 m (40 ft)                                                                                       |
| 电气连续性Electrical Continuity | 根据要求提供 Available according to requirement                                                                                 |
| 输送介质Service Medium         | LPG/丙烷/丁烷/液化石油气混合物<br>LPG / Propane / Butane / LPG Mixture                                                                |

海上NG漂浮/水下软管

Offshore NG Floating & Submarine Hose

Flexible Hose Solution for Offshore NG Transfer



OFFSHORE NG TRANSFER SYSTEM

产品概述 | Product Overview

GETSAF 海上 NG漂浮/水下软管面向海上气态天然气输送工况开发，适用于 FSRU再气化天然气外输、海上接收设施及近岸/海上管线连。

软管基于大口径海洋软管技术，采用天然气耐介质内衬、增强管体和项目化漂浮/水下配置，可适应 FSRU运动、波浪流载荷及动态运行条。

GETSAF Offshore NG Floating & Submarine Hose is engineered forgaseous natural gas transfer in offshore environments, including regasified natural gas export from FSRUs and offshore gas receiving connections.

Based on large-bore marine hose technology, the hose combines a gas-resistant liner, reinforced hose body and project-specific floating/submarine configuration to accommodate FSRU motion and demanding offshore conditions.

产品特点 | Product Features

|                                                                                                                    |                                           |                                                                                                                 |                                |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------|
| <b>天然气耐介质内衬</b>                                                                                                    | <b>Natural Gas Resistant Liner</b>        | <b>单/双骨架结构</b>                                                                                                  | <b>Single / Double Carcass</b> |
| 适配气态天然气、再气化天然气和富甲烷气体，降低气体渗透。<br>Compatible with gaseous natural gas, regasified natural gas and methane-rich gas.  |                                           | 增强管体可承受内压、拉伸、弯曲及海上循环载荷。<br>Reinforced hose body withstands pressure, tensile loading, bending and cyclic loads. |                                |
| <b>漂浮/水下配置</b>                                                                                                     | <b>Floating / Submarine Configuration</b> | <b>渗透与减压控制 Permeation &amp; Decompression Control</b>                                                           |                                |
| 可按 FSRU 外输、近岸接收和海上管线连接布置管串。<br>Configurable for FSRU export, nearshore receiving and offshore pipeline connection. |                                           | 降低气体渗透和快速减压导致的材料损伤风险。<br>Designed to reduce gas permeation and rapid gas decompression damage risk.             |                                |

技术参数 | Technical Parameters

|                       |                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------|
| 输送介质 Medium           | 气态天然气 / 再气化天然气 / 富甲烷气体<br>Gaseous Natural Gas / Regasified Natural Gas / Methane-rich Gas                                 |
| 应用 Application        | FSRU 外输 / 海上天然气输送<br>FSRU / Offshore Natural Gas Transfer                                                                 |
| 软管类型 Hose Type        | 漂浮 / 水下 NG 软管<br>Floating /Submarine NG Hose                                                                              |
| 内径 Inner Diameter     | 6" - 24"                                                                                                                  |
| 工作压力 Working Pressure | 额定压力最高 50 bar；更高压力按项目设计和软管内径确定<br>Rated pressure up to 50 bar; higher pressure rating by project design and hose diameter |
| 骨架类型 Carcass Type     | 单骨架 / 双骨架<br>Single Carcass / Double Carcass                                                                              |

Note: Natural gas here refers to gaseous or regasified natural gas service; cryogenic LNG transfer requires a separate qualified hose design.



油轮围栏管 | Tanker Rail Hose



单管体油轮围栏管 GS81115  
Single Carcass GS81115



双管体油轮围栏管 GS82115  
Double Carcass GS82115

尾管 | Tail Hose



单管体尾管 GS81114  
Single Carcass GS81114



双管体尾管 GS82114  
Double Carcass GS82114

油轮甲板围栏连接 | Tanker Deck Rail Connection

产品概述 | Product Overview

油轮围栏管用于连接油轮甲板围栏与码头管道系统，在船舶靠泊和装卸作业过程中承受动态载荷和海浪冲击。GETSAF油轮围栏管采用高强度骨架结构，具有优异的耐疲劳性能。

Tanker hose lines are used to connect a tanker's deck manifold to the terminal's pipeline system, enduring dynamic loads and wave impacts during berthing and cargo transfer operations. GETSAF tanker hose lines feature a high-strength skeletal structure, offering superior fatigue resistance.

技术参数 | Technical Parameters

| 参数Parameter         | 规格Specification             |
|---------------------|-----------------------------|
| 型号Model             | GS81115（单骨架） / GS82115（双骨架） |
| 内径InsideDiameter    | 6"(150mm)-24"(600mm)        |
| 工作压力WorkingPressure | 15bar/ 19bar/ 21bar         |
| 爆破压力BurstPressure   | ≥5×WP(75/ 95/ 105bar)       |
| 最小弯曲半径MinBendRadius | 4×DN(Floating)              |
| 温度范围Temperature     | 介质Media:-20℃~+82℃           |
| 端部连接Flange          | ASME B 16.5 Class 150/130   |

软管系统末端连接 | Hose String End Connection

产品概述 | Product Overview

尾管是CALM/SPM软管系统的末端组件，连接最后一节软管与船舶或码头管道。GS81114 /GS82114尾管采用特殊加强结构，可承受较大的弯曲应力和端部载荷。

The tail hose is the terminal component of a CALM/SPM hose system, connecting the final hose section to the vessel or terminal piping. The GS81114/GS82114 tail hose features a specially reinforced structure designed to withstand significant bending stresses and end loads.

技术参数 | Technical Parameters

| 参数Parameter         | 规格Specification                 |
|---------------------|---------------------------------|
| 型号Model             | GS81114（单骨架） / GS82114（双骨架）     |
| 内径InsideDiameter    | 6"(150mm)-24"(600mm)            |
| 工作压力WorkingPressure | 15bar/ 19bar/ 21bar             |
| 爆破压力BurstPressure   | ≥5×WP                           |
| 最小弯曲半径MinBendRadius | 6×DN(Floating)                  |
| 吊装耳板LiftingLugs     | 12"=100kN/ 16"=150kN/ 20"=200kN |
| 标准长度StandardLength  | 9.1m/ 10.7m/ 12.2m              |



变径管 | Reducer Hose



单管体变径管 GS81113  
Single Carcass GS81113



双管体变径管 GS82113  
Double Carcass GS82113

主管 | Mainline Hose



单管体漂浮主管 GS81112  
Single Carcass GS81112



双管体漂浮主管 GS82112  
Double Carcass GS82112

不同管径连接 | Different Diameter Connection

产品概述 | Product Overview

变径管用于连接不同内径的管道系统，实现流量的平滑过渡。GETSAF变径管采用锥形加强结构设计，确保在变径区域的强度和密封性能。

Reducers are used to connect piping systems with differing internal diameters, facilitating a smooth transition of flow. GETSAF reducers feature a tapered reinforced structural design, ensuring exceptional strength and sealing performance within the transition zone.

技术参数 | Technical Parameters

| 型号Code              | 变径规格ID Range                 | 工作压力WP        |
|---------------------|------------------------------|---------------|
| GS81113             | 8"→6"/ 10"→8"/ 12"→10"       | 15/ 19/ 21bar |
| GS82113             | 8"→6"~16"→12"                | 15/ 19/ 21bar |
| GS81113-HD          | 20"→16"/ 24"→20"             | 15bar         |
| GS82113-HD          | 20"→16"/ 24"→20"             | 15bar         |
| 爆破压力BurstPressure   | ≥5×WP                        |               |
| 浮力储备BuoyancyReserve | ≥20%(Min)                    |               |
| 电气性能Electrical      | 连续导电/ ContinuousConductivity |               |

软管系统主干管路 | Hose String Main Pipeline

产品概述 | Product Overview

主管是CALM/SPM软管系统的主干管路，承担主要的油品输送任务。GS81112/GS82112采用高强度骨架设计，具有优异的耐压性能和抗疲劳特性，适用于各种海况条件。

The main hose serves as the backbone of the CALM/SPM hose system, undertaking the primary task of transporting oil products. The GS81112/GS82112 features a high-strength skeletal design, offering superior pressure resistance and fatigue resistance, making it suitable for operation under a wide range of sea conditions.

技术参数 | Technical Parameters

| 参数Parameter         | 规格Specification            |
|---------------------|----------------------------|
| 型号Model             | GS81112（单骨架）/ GS82112（双骨架） |
| 内径InsideDiameter    | 6"(150mm)-24"(600mm)       |
| 工作压力WorkingPressure | 15bar/ 19bar/ 21bar        |
| 爆破压力BurstPressure   | ≥5×WP                      |
| 最小弯曲半径MinBendRadius | 6×DN(Floating)             |
| 浮力材料Buoyancy        | 闭孔泡沫Closed-cellFoam        |
| 标准长度StandardLength  | 9.1m/ 10.7m/ 12.2m         |



## 一端增强半漂浮管 | One End Reinforced Half Floating Hose



单管体一端增强半漂浮管 GS81111  
Single Carcass Half Floating GS81111



双管体一端增强半漂浮管 GS82111  
Double Carcass Half Floating GS82111

### 半漂浮式设计 | Half Floating Design

#### 产品概述 | Product Overview

一端增强半漂浮管一端配备加强结构，另一端为标准端部连接。这种设计可减少弯折应力，延长软管在动态载荷条件下的使用寿命。

The single-end reinforced semi-floating hose features a reinforced structure at one end, while the other end utilizes a standard connection. This design reduces bending stress and extends the service life of the hose under dynamic load conditions.

#### 技术参数 | Technical Parameters

| 参数Parameter          | 规格Specification               |
|----------------------|-------------------------------|
| 型号Model              | GS81111 (单骨架) / GS82111 (双骨架) |
| 内径Inside Diameter    | 6"(150mm)-24"(600mm)          |
| 工作压力Working Pressure | 15bar/ 19bar/ 21bar           |
| 爆破压力Burst Pressure   | $\geq 5 \times WP$            |
| 增强端位置Reinforced End  | 船舶端Ship End                   |
| 浮力材料Buoyancy         | 半漂浮Half Floating              |
| 标准长度Standard Length  | 9.1m/ 10.7m/ 12.2m            |

## 聚氨酯涂层软管 | Polyurethane-Coated Hose



聚氨酯涂层软管 GS82112-PU  
PU Coating Mainline GS82112-PU

### 外覆黄色聚氨酯防腐层 | Yellow PU External Coating

#### 产品概述 | Product Overview

聚氨酯涂层软管外覆黄色聚氨酯层，有效抵抗海水中盐分、微生物和海洋生物的腐蚀，大幅延长使用寿命。

The polyurethane-coated hose features an outer layer of yellow polyurethane, which effectively resists corrosion caused by seawater salinity, microorganisms, and marine life, thereby significantly extending its service life.

#### 技术参数 | Technical Parameters

| 参数Parameter              | 规格Specification                    |
|--------------------------|------------------------------------|
| 型号Model                  | GS82112-PU                         |
| 内径Inside Diameter        | 6"(150mm)-24"(600mm)               |
| 工作压力Working Pressure     | 15bar/ 19bar/ 21bar                |
| 聚氨酯层厚度PU Layer Thickness | $\geq 3\text{mm}$                  |
| 涂层颜色Coating Color        | 高可视橙色High-Visibility Bright Orange |



卷轴软管 | Reeling Hose



单管卷轴软管 GS81112-REEL  
Single Carcass Reeling GS81112-REEL

双管卷轴软管 GS82112-REEL  
Double Carcass Reeling GS82112-REEL

卷筒式收放软管| Reel-TypeHoseSystem

产品概述 | Product Overview

卷轴软管专为卷筒式收放系统设计，可实现快速部署和回收。GS81112-REEL/GS82112-REEL 采用特殊加强结构，适应频繁的卷绕和展开操作。

These reel-mounted hoses are specifically designed for reel-based deployment and retrieval systems, enabling rapid deployment and retraction. The GS81112-REEL and GS82112-REEL models feature a specialized reinforced structure to withstand frequent winding and unwinding operations.

技术参数 | Technical Parameters

| 参数Parameter          | 规格Specification            |
|----------------------|----------------------------|
| 型号Model              | GS81112-REEL/ GS82112-REEL |
| 内径Inside Diameter    | 4"(100mm)-12"(300mm)       |
| 工作压力Working Pressure | 15bar/ 19bar/ 21bar        |
| 适用卷筒ReelType         | 液压驱动/手动Hydraulic/Manual    |
| 内衬材料Liner            | NBR耐油橡胶Oil-resistantNBR    |
| 标准长度StandardLength   | 按卷筒规格Asperreelspec         |

带浮体环一端增强管 | One End Reinforced with Float Collar



单管体带浮体环一端增强管 GS81211-FC    双管体带浮体环一端增强管 GS82211-FC  
Single Carcass FC GS81211-FC                      Double Carcass FC GS82211-FC

半漂浮式设计| Half Floating Design

产品概述 | Product Overview

带浮体环一端增强管在一端配备浮体环，另一端为加强结构。浮体环提供额外浮力支撑，适用于浅水区域的CALM系统。

The Enhanced Pipe with Floating Ring is equipped with a floating ring at one end, while the other end features a reinforced structure. The floating ring provides additional buoyant support, making it suitable for CALM systems deployed in shallow-water regions.

技术参数 | Technical Parameters

| 参数Parameter          | 规格Specification                   |
|----------------------|-----------------------------------|
| 型号Model              | GS81211-FC（单骨架） / GS82211-FC（双骨架） |
| 内径Inside Diameter    | 6"(150mm)-24"(600mm)              |
| 工作压力Working Pressure | 15bar/ 19bar/ 21bar               |
| 适用水深Water Depth      | ≤50m(ShallowWater)                |
| 标准长度Standard Length  | 9.1m/ 10.7m/ 12.2m                |



不带浮体环一端增强管 | One End Reinforced without Float Collar



单管不带浮体环一端增强管 GS81211-NFC      双管不带浮体环一段增强管 GS82211-NFC  
Single Carcass NFC GS81211-NFC      Double Carcass NFC GS82211-NFC

无浮体环配置 | No Float Collar Configuration

产品概述 | Product Overview

不带浮体环一端增强管适用于深水作业环境，无需额外的浮力支撑。这种配置可减少水下负载和安装成本，适合水深超过50米的应用。

The enhanced pipe—featuring a non-buoyant end—is suitable for deep-water operational environments, requiring no additional buoyancy support. This configuration reduces underwater loads and installation costs, making it ideal for applications in water depths exceeding 50 meters.

技术参数 | Technical Parameters

| 参数Parameter           | 规格Specification                     |
|-----------------------|-------------------------------------|
| 型号Model               | GS81211-NFC（单骨架） / GS82211-NFC（双骨架） |
| 内径Inside Diameter     | 6"(150mm)-24"(600mm)                |
| 工作压力Working Pressure  | 15bar/ 19bar/ 21bar                 |
| 爆破压力Burst Pressure    | ≥5×WP                               |
| 最小弯曲半径Min Bend Radius | 4×DN(Submerged)                     |
| 适用水深Water Depth       | >50m(Deep Water)                    |
| 安装方式Installation      | 水下Submerged                         |

带浮体环主管 | Mainline with Float Collar



单管体带浮体环主管 GS81212-FC      双管体带浮体环主管 GS82212-FC  
Single Carcass Mainline FC GS81212-FC      Double Carcass Mainline FC GS82212-FC

主管浮体环系统 | Mainline Float Collar System

产品概述 | Product Overview

带浮体环主管在标准主管基础上配备浮体环，提供额外的浮力支撑。这种配置广泛应用于浅水CALM系统，确保软管串在海面保持正确姿态。

The main hose equipped with flotation collars features flotation rings added to a standard main hose, providing additional buoyant support. This configuration is widely utilized in shallow-water CALM systems, ensuring that the hose string maintains the correct attitude at the sea surface.

技术参数 | Technical Parameters

| 参数Parameter            | 规格Specification                   |
|------------------------|-----------------------------------|
| 型号Model                | GS81212-FC（单骨架） / GS82212-FC（双骨架） |
| 内径Inside Diameter      | 6"(150mm)-24"(600mm)              |
| 工作压力Working Pressure   | 15bar/ 19bar/ 21bar               |
| 浮体环规格Float Collar Spec | 直径根据软管规格Perhosespec               |
| 适用水深Water Depth        | ≤50m(Shallow Water)               |
| 标准长度Standard Length    | 9.1m/ 10.7m/ 12.2m                |



不带浮体环主管 | Mainline without Float Collar



单管不带浮体环主管 GS81212-NFC  
Single Carcass Mainline NFC GS81212-NFC

双管不带浮体环主管 GS82212-NFC  
Double Carcass Mainline NFC GS82212-NFC

标准主管配置| Standard Mainline Configuration

产品概述 | Product Overview

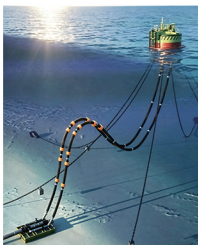
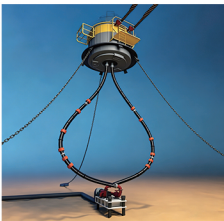
不带浮体环主管是深水应用的标准配置，适用于水深超过50米的FPSO和浮式装置软管系统。这种配置减少了水下负载和安装复杂度。

Main hoses without flotation collars represent the standard configuration for deepwater applications, suitable for hose systems on FPSOs and floating installations situated in water depths exceeding 50 meters. This configuration reduces both the underwater load and installation complexity.

技术参数 | Technical Parameters

| 参数Parameter           | 规格Specification                    |
|-----------------------|------------------------------------|
| 型号Model               | GS81212-NFC（单骨架）/ GS82212-NFC（双骨架） |
| 内径Inside Diameter     | 6"(150mm)-24"(600mm)               |
| 工作压力Working Pressure  | 15bar/ 19bar/ 21bar                |
| 爆破压力Burst Pressure    | ≥5×WP                              |
| 最小弯曲半径Min Bend Radius | 4×DN(Submerged)                    |
| 适用水深Water Depth       | >50m(Deep Water)                   |

灯笼式/懒S型/陡S型软管 | Lantern/Lazy-S/Steep-S Hose



灯笼式软管 GS84212-LT  
Lantern Hose GS84112-LT

懒S型/陡S型软管 GS84212-LT/SS  
Lazy-S / Steep-S GS84112-LT/SS

特殊形态软管| Special Shape Hose

产品概述 | Product Overview

灯笼式、懒S型和陡S型软管是特殊形态的软管配置，用于适应特定的安装空间和运动补偿需求。这些软管在有限的垂直空间内提供必要的位移补偿能力。

Lantern-style, "Lazy S" and "Steep S" hoses are specialized hose configurations designed to accommodate specific installation spaces and motion compensation requirements. These hoses provide the necessary displacement compensation capabilities within limited vertical spaces.

技术参数 | Technical Parameters

| 类型Type               | 型号Code               | 应用Application           |
|----------------------|----------------------|-------------------------|
| 灯笼式Lantern           | GS84112-LT           | 垂直位移补偿Vertical Movement |
| 懒S型Lazy-S            | GS84112-LS           | 水平位移补偿Horizontal        |
| 陡S型Steep-S           | GS84112-SS           | 大角度偏转Large Angle        |
| 内径Inside Diameter    | 6"(150mm)-24"(600mm) |                         |
| 工作压力Working Pressure | 15bar/ 19bar/ 21bar  |                         |
| 爆破压力Burst Pressure   | ≥5×WP                |                         |
| 标准长度Length           | 9.1m/ 10.7m/ 12.2m   |                         |



STS输油管 | STS Loading Hose



船对船输油管 GS86212-STS  
Ship-to-Ship Loading GS86212-STS

船对船输油| Ship-to-Ship Oil Transfer

产品概述 | Product Overview

STS (Ship-to-Ship) 输油管用于两船之间的原油或产品油转运作业。GS86212-STS/ GS86122-STS符合EN1765和OCIMF船对船操作指南要求。

STS (Ship-to-Ship) oil transfer hoses are used for the transfer of crude oil or refined products between two vessels. Models GS86212-STS and GS86122-STS comply with the requirements of EN1765 and the OCIMF Ship-to-Ship Transfer Guide.

技术参数 | Technical Parameters

| 参数Parameter           |     | 规格Specification           |
|-----------------------|-----|---------------------------|
| 型号Model               |     | GS86212-STS/ GS86122-STS  |
| 内径Inside Diameter     |     | 4"(100mm)-12"(300mm)      |
| 工作压力Working Pressure  |     | 15bar/19bar/21bar         |
| 设计标准Standard          |     | EN1765/ OCIMF GMPHOM 2009 |
| 最大流速Max Flow Velocity |     | 21m/s                     |
| 内径 (ID)               |     | 最大生产长度                    |
| Inch                  | mm  | Max length (m)            |
| 4"                    | 102 | 60                        |
| 6"                    | 150 | 60                        |
| 8"                    | 200 | 50                        |
| 10"                   | 250 | 50                        |
| 12"                   | 300 | 12.2                      |

码头专用输油管 |Port Loading Hose



码头专用输油管 GS86212-PLT  
Port Loading Standard GS86212-PLT



重型码头专用输油管 GS86215-PLT  
Port Loading Heavy Duty GS86215-PLT

码头装卸作业| PortLoading/UnloadingOperations

产品概述 | Product Overview

码头专用输油管是连接码头管道与船舶接口的关键设备，承受频繁的连接操作和动态载荷。GS86212-PLT/GS86215-PLT具有优异的耐疲劳性能，符合EN1765标准。

Dedicated marine oil transfer hoses serve as critical components connecting terminal piping to vessel interfaces, enduring frequent connection operations and dynamic loads. The GS86212-PLT and GS86215-PLT models exhibit exceptional fatigue resistance and comply with the EN1765 standard.

技术参数 | Technical Parameters

| 参数Parameter          |     | 规格Specification          |
|----------------------|-----|--------------------------|
| 型号Model              |     | GS86212-PLT/ GS86215-PLT |
| 内径Inside Diameter    |     | 4"(100mm)-12"(300mm)     |
| 工作压力Working Pressure |     | 15bar/19bar/21bar        |
| 端部连接Flange           |     | ANSI B16.5 Class 150/300 |
| 适用标准Standard         |     | EN1765/ OCIMF MEG 4      |
| 内衬材料Liner            |     | NBR耐油橡胶                  |
| 认证Certification      |     | ABS/ BV/ CCS             |
| 内径 (ID)              |     | 最大生产长度                   |
| Inch                 | mm  | Max length (m)           |
| 4"                   | 102 | 60                       |
| 6"                   | 150 | 60                       |
| 8"                   | 200 | 50                       |
| 10"                  | 250 | 50                       |
| 12"                  | 300 | 12.2                     |



# StorageAndTransportationOperationSpecification

使用固定在托盘吊眼上的四脚吊索，一次吊起一个托盘，堆放在坚实的平地上，最多叠加3层。

**注：可以使用叉车装卸专用托盘，否则不要使用叉车提起托盘。**

Note: A customised pallet design may be provided for fork lift handling. Such pallets will be appropriately identified. Otherwise do not lift pallets using forklift trucks.

- 使用额定的吊车和吊具 Use suitable rated crane and spreader bar.
- 吊起软管时，应使用最小100毫米宽的柔性吊带

Sling the hose using minimum 100 mm wide textile straps appropriately rated.

- 至少用三条或更多的柔性吊带吊起软管

Sling from three hooks or more spaced over the hose length.

·用索时要考虑到软管末端法兰的局部承重能力

Position slings to take account of local weight concentrations from the hose.

·如果2点的抬升在操作上不可避免，则选择“四分之一点”的位置带起软管

Use the hose "quarterpoints" if a 2 point lift is operationally unavoidable.



- 不允许使用钢丝绳或类似的吊索 Small circumference rope or similar slings
- 不允许使用单吊带吊软管的中间点 Lifting by a single sling at the hose mid-point
- 两根吊索吊起时, 不允许起吊位置仅在法兰上 Lifting by two slings, one at each flange
- 不允许用叉车又直接吊装 Direct lifting with fork lift truck forks
- 禁止导致局部负荷过大/软管过度弯曲的操作 DO NOT use any lift method that results in severe local loading and/or over-bending of the hose
- 禁止在不平地地面拖拽软管 (会损坏胶管外层和法兰) DO NOT drag the hose over unsuitable surfaces (damage cover or end flanges)

储存过程中，软管应防止以下情况：

- 阳光 Sunlight ·湿度过重 Excessive humidity  
·机械损伤 Mechanical damage ·化学制品腐蚀 Chemicals  
·极限温度 Temperature extremes ·臭氧 ozone ·虫害 Pests

**室外储存要求：**软管应放置在坚实、平整的地面上，并做好环境防护

On an area of solid,level ground,with separate protection against the environment.



- 吊杆和移动式起重机 Spreader bar and mobile crane  
定制软管托拖车 Customised hose towing trolleys  
拖车与软管安全堆放

Trailer with hoses safely stacked and chocked

- ### ·带专用配件的叉车

## Fork lift trucks with specialised attachments

- 各类机械损伤  
Sundry mechanical damage
- 啮齿动物的攻击 Rodent attack
- 虫害 Insect attack
- 橡胶老化（裂纹）  
General rubber degradation (cracks)



工况信息采集 InformationCollectionForm

Please provide as much as you can for the best hose design.  
为了更好的胶管设计,请尽可能全面的填写如下信息:

1. Customer info(客户信息):

2. Port and application field(港口以及应用领域):

3. Location(位置):

4. Application(应用系统):

☐ SALM☐ CMBM☐ SBM☐ OTHER'S(其他)

5. Environment Conditions(环境因素):

5.1Sea depth(水深):

5.2Tidal range(潮汐变化):

5.3Operational conditions(使用工况):

(a)Wave height(波高):

(b)Wave period(波周期):

(c)Wind speed(风速):

6. Purpose(用途):

☐ Loading(吸排)☐ Unloading(排)

7. Medium(介质):

7.1Medium type介质种类:

☐ Crude oil(原油)☐ Liquid petroleum products(液化石油产品)☐ Natural gas(天然气)

7.2 Specific gravity(密度)

7.3 Maximum aromatic hydrocarbon content (最大芳香烃含量):

8. Operating Pressure(工作压力):

8.1 Operating pressure at buoy(浮标端工作压力):

8.2Operating pressure at tanker(油轮端工作压力):

8.3Maximum working pressure(最大工作压力):

9. Temperature (温度)

Fluid temperature(介质温度):

Ambient temperature(环境温度):

10. Flow rate (流速):

11. Hose string (软管串)

11.1 Quantity(数量):

11.2 Floating hose type,size,and quantity(漂浮管类型,尺寸和数量):

11.3 Submarine hose type,size,and quantity(水下管类型,尺寸和数量):

11.4 Submarine hose Configuration水下管组态:

☐ Chinese Lantern中国灯笼☐ Lazy-S懒S型☐ Steep S陡S型☐ others其他

12. Vessel 油船

12.1 Maximum Dead Weight Ton(最大载重吨位):

12.2 Average Dead Weight Ton(平均载重吨位):

12.3 Minimum Dead Weight Ton(最小载重吨位):

12.4 Operation frequency(操作频率):



Please complete as fully as possible to allow prompt quotation  
请尽可能完整地填写如下信息，以便及时报价:

Date of Inquiry(询价日期):

Required date of quotation (报价日期):

Required of delivery(交货期):

Destination (交货地):

☐ EXW With TAX      ☐ FOB Qingdao      ☐ CIF(Port (目的港): )

☐ US Dollar美金      ☐ Chinese RMB元      ☐ Others 其他

### 1.1 Specification行业标准:

☐ GMPHOM2009      ☐ Customer's Spec (客户要求)

1.2 Raifed Pressure工作压力:

☐ 15Bar                      ☐ 19Bar                      ☐ 21Bars

### 1.3 Fluid介质:

☐ Crude oil(原油)    ☐ Liquid Petroleum products (液态柴汽油)    ☐ Nature gas (天然气)    ☐ Others其他(    )

#### 1.4 Flange Standard 法兰标准:

☐ ANSI 150                      ☐ ANSI 300

### 1.5 Flange Face 法兰面:

☐ Flat face(FE)平面      ☐ Raised face(RF)凸面

### 1.6 Third Party Inspection第三方检测：

☐ Not Required(Manufacture's test certificates for each hose to be submitted)不需要第三方检测(仅提供每条胶管的工厂检测证书)

☐ Required需要第三方检测

☐ All hose(同一批所有胶管) ☐ Random test (抽检)

☐ At Customer's account (买家支付第三方检测费用) ☐ At Manufacturer's account (工厂支付第三方检测费用)

1.7 Package(包装):

### 1.8 Drawing (图纸):

☐ Required with BID (随标书一起提交)    ☐ Required when ordered (下订单时候需要)

### 1.9 Logo商标:

☐ GETSAF (工厂品牌) ☐ Customer's Brand (客户商标)

### 1.10 Details胶管详情:

| No | Description胶管描述 | Size尺寸 | Length长度 | Quantity数量 | Remarks备注 |
|----|-----------------|--------|----------|------------|-----------|
| 1  |                 |        |          |            |           |
| 2  |                 |        |          |            |           |
| 3  |                 |        |          |            |           |



Part 2
Dredging Hose

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## 漂浮排泥主管 | Floating Discharge Hose



漂浮排泥主管 GS-DG21-FD  
Floating Discharge Hose GS-DG21-FD

### 浮式排泥主线输送 | Floating Discharge Mainline Transfer

#### 产品概述 | Product Overview

漂浮排泥主管用于疏浚系统的水面主输送线，通常连接绞吸船、耙吸船、增压站与岸线排送管路，在输送泥浆、砂水混合物及高磨蚀固体介质时承担连续主线输送功能。该类产品通过集成浮力结构或匹配式浮体设计，使软管在水面保持稳定线型，便于安装、拆解、拖带和运行中的线型控制。

Floating discharge hose is used on the surface mainline of dredging systems, typically connecting a dredger, booster station and shore pipeline for the continuous transfer of slurry, sand-water mixtures and other abrasive media. This hose family combines pressure capability with controlled buoyancy so the hose string remains stable on the water surface and can be installed, towed and operated with predictable line behaviour.

#### 技术参数 | Technical Parameters

| 参数Parameter           | 规格Specification                                    |
|-----------------------|----------------------------------------------------|
| 型号Model               | GS-DG21-FD                                         |
| 内径InsideDiameter      | 400mm-1200mm                                       |
| 工作压力WorkingPressure   | 1.0MPa-4.0MPa                                      |
| 设计比重Design SG         | 1.0-2.3                                            |
| 浮力储备Flotation Reserve | 20%-30%                                            |
| 标准长度Standard Length   | 6.1m-11.8m                                         |
| 端部连接End Flange        | 钢法兰 Steel Flange                                   |
| 适用介质Typical Medium    | 海水、泥浆、砂水混合物 Seawater / Slurry / Sand-Water Mixture |

## 锥形或半漂浮过渡管 | Tapered / Half Floating Hose



锥形或半漂浮过渡管 GS-DG22-TF  
Tapered/Half Floating Hose GS-DG22-TF

### 浮式主管至非漂浮段过渡 | Transition from Floating Line to Non-Floating Section

#### 产品概述 | Product Overview

锥形或半漂浮过渡管用于漂浮主管与后续下沉管、岸线管或其他非漂浮管段之间的过渡连接，通过逐步改变浮力分布、管体刚度和外形轮廓，降低管线在工况变化时的局部弯折和应力集中。该类产品常用于需要控制入水角度、管线垂度和浮沉切换区受力状态的疏浚输送系统。

Tapered or half floating hose is positioned between the fully floating mainline and the downstream non-floating section. By gradually adjusting buoyancy distribution, body geometry and structural stiffness, this hose helps reduce local bending stress and improves line profile control where the hose string changes from floating service to submerged or shore-connected service.

#### 技术参数 | Technical Parameters

| 参数Parameter           | 规格Specification                                   |
|-----------------------|---------------------------------------------------|
| 型号Model               | GS-DG22-TF                                        |
| 内径InsideDiameter      | 500mm-1200mm                                      |
| 工作压力WorkingPressure   | 1.0MPa-3.0MPa                                     |
| 设计比重Design SG         | 1.4-1.8                                           |
| 浮力储备Flotation Reserve | 20%-30%                                           |
| 标准长度Standard Length   | 11.8m                                             |
| 端部连接End Flange        | 局部浮力 / 锥形浮力 Partial Floatation / Tapered Buoyancy |
| 端部连接End Fittings      | 法兰连接 Flanged Ends                                 |



铠装漂浮疏浚管 | Armored Floating Hose



铠装漂浮疏浚管 GS-DG25-AF  
Armored Floating Hose GS-DG25-AF

含尖锐颗粒水面排送工况| Surface Transfer for Sharp and Abrasive Media

产品概述 | Product Overview

耐切割漂浮疏浚管适用于含有珊瑚碎片、贝壳、岩石颗粒或其他尖锐固体介质的水面输送场景，在保持浮式输送功能的同时强化内衬耐切割性能和整体耐磨寿命。该类产品通常在内胶层或工作层中引入耐切割结构设计，以降低尖锐介质对软管内壁造成的局部破坏风险。

Armored floating hose is developed for floating transfer of slurry containing sharp and highly abrasive solids such as coral fragments, shell pieces or angular rock particles. This hose family retains the buoyant performance required for surface service while incorporating a cut-resistant working structure to improve resistance against internal damage and prolong service life in severe abrasive conditions.

技术参数 | Technical Parameters

| 参数Parameter           | 规格Specification  |
|-----------------------|------------------|
| 型号Model               | GS-DG25-AF       |
| 内径InsideDiameter      | 700mm-1200mm     |
| 工作压力WorkingPressure   | 2.5MPa-4.0MPa    |
| 设计比重Design SG         | 1.0-2.4          |
| 浮力储备Flotation Reserve | 20%-25%          |
| 耐切割层Armor Hardness    | HB400-HB550      |
| 标准长度Standard Length   | 6.1m-11.8m       |
| 端部连接End Fittings      | 钢法兰 Steel Flange |

排泥管 | Discharge Hose



钢法兰排泥管 GS-DG23-DH  
Discharge Hose with Steel Nipple  
GS-DG23-DH



胶法兰排泥管 GS-DG23-DH  
Discharge Hose with Sandwich Flange  
GS-DG23-DH

耐磨浆体排送工况| Abrasive Slurry Discharge Service

产品概述 | Product Overview

排泥管主要应用于疏浚系统的排送侧管线、增压泵后输送段及岸线排送段，用于输送高浓度泥浆、砂砾混合物和其他高磨损介质。该类产品通常采用高耐磨内胶层、增强骨架层和耐候外覆层设计，在满足压力输送要求的同时兼顾弯曲柔性、连接可靠性和现场安装便利性。

Discharge hose is used on dredging discharge lines, booster discharge sections and shore lines for the transfer of highly abrasive slurry and sand mixtures. Publicly available product layouts for this hose family consistently emphasize a wear-resistant liner, reinforced carcass structure and reliable end fittings to support pressure transfer, field handling and repeated connection in dredging service.

技术参数 | Technical Parameters

| 参数Parameter         | 规格Specification                                 |
|---------------------|-------------------------------------------------|
| 型号Model             | GS-DG23-DH                                      |
| 内径InsideDiameter    | 200mm-1200mm                                    |
| 工作压力WorkingPressure | 2.5MPa-3.5MPa                                   |
| 标准长度Standard Length | 1m-11.8m                                        |
| 内衬材料Inner Liner     | 高耐磨 NR / SBR<br>Abrasion Resistant NR / SBR     |
| 连接形式End Connectio   | 钢法兰 / 胶法兰 Steel Flange /<br>Sandwich Flange     |
| 适用介质Typical Medium  | 泥浆、砂、水和矿浆 Slurry / Sand / Water /<br>Ore Slurry |
| 外覆层Cover            | 耐候耐磨橡胶 Weather and Abrasion Resistant<br>Cover  |



吸泥管 | Suction Hose



吸泥管 GS-DG24-SH  
Suction Hose GS-DG24-SH

吸泥侧负压工况 | Negative Pressure Suction Service

产品概述 | Product Overview

吸泥管用于耙吸船拖头系统、绞吸船吸泥侧及其他需要承受负压抽吸的疏浚管路，用于从海床或作业面吸入泥浆、砂石和水混合物。与普通排泥管相比，该类产品除需具备耐磨输送能力外，还需要具备良好的真空抗塌陷性能、端部连接强度和弯曲适应性，以保证吸泥工况下的稳定运行。

Suction hose is designed for the suction side of dredging systems, including draghead systems on trailing suction hopper dredgers and suction lines on cutter suction dredgers. In addition to abrasion resistance, this hose family must provide adequate vacuum resistance, body stability and end reinforcement so the hose remains serviceable under negative pressure and repeated bending during suction duty.

技术参数 | Technical Parameters

| 参数Parameter           | 规格Specification                           |
|-----------------------|-------------------------------------------|
| 型号Model               | GS-DG24-SH                                |
| 内径InsideDiameter      | 200mm-700mm                               |
| 真空度Vacuum Resistance  | -0.09MPa                                  |
| 工作压力Working Pressure  | 1.5MPa-3.0MPa                             |
| 标准长度Standard Length   | 1m-11.8m                                  |
| 内衬材料Inner Liner       | 高耐磨橡胶 Wear Resistant Rubber               |
| 端部连接End Flange        | 胶法兰 / 钢法兰 Rubber Flange / Sandwich Flange |
| 最小弯曲半径Min Bend Radius | 约 4×DN                                    |

铠装吸排疏浚管 | Armored Suction /Discharge Hose



钢法兰铠装管 GS-DG27-ASD  
Armored Hose with Steel Nipple  
GS-DG27-ASD



胶法兰铠装管 GS-DG27-ASD  
Armored Hose with Sandwich Flange  
GS-DG27-ASD

吸排双工况重载服务| Combined Suction and Discharge Heavy Duty Service

产品概述 | Product Overview

耐切割吸排疏浚管用于既需要承受负压抽吸、又需要承受正压排送的重载疏浚工况，适合输送含有较大、较尖锐固体颗粒的浆体介质。该类产品在结构上同时兼顾真空抗塌陷、压力输送、耐切割和耐磨损性能，适用于特殊工况、过渡工况或项目定制型吸排系统。

Armored suction / discharge hose is intended for severe duty service where both suction capability and discharge pressure performance are required in one hose structure. It is especially suitable for media containing large or sharp solids, and is typically engineered to combine vacuum stability, pressure transfer, cut resistance and abrasion resistance within a single heavy-duty hose body.

技术参数 | Technical Parameters

| 参数Parameter          | 规格Specification                        |
|----------------------|----------------------------------------|
| 型号Model              | GS-DG27-ASD                            |
| 内径InsideDiameter     | 500mm-1200mm                           |
| 工作压力WorkingPressure  | 2.5MPa-4.0MPa                          |
| 真空度Vacuum Resistance | -0.08MPa                               |
| 标准长度Standard Length  | 1m-11.8m                               |
| 耐切割层Armor Hardness   | HB350-HB500                            |
| 端部连接End Connection   | 钢法兰/胶法兰 Steel Flange/Sandwich Flange   |
| 应用场景Typical Service  | 重载吸泥 / 排泥 Severe Suction and Discharge |



伸缩补偿节 | Expansion Joint



伸缩补偿节 GS-DG28-EJ  
Expansion Joint GS-DG28-EJ

位移补偿与振动隔离 | Movement Compensation and Vibration Isolation

产品概述 | Product Overview

伸缩补偿节用于吸收相邻管段之间的轴向位移、横向偏移、角度偏转和安装误差，并减小振动和局部应力向系统其他部位传递。该类产品常布置在设备接口、刚柔过渡段、转接段或需要提高安装容差的工位，用于提升系统运行稳定性和维护便利性。

Expansion joint is used to absorb axial movement, lateral displacement, angular misalignment and installation tolerance between connected sections of a piping or hose system. It also helps reduce vibration transfer and local stress concentration, making it a practical solution for equipment interfaces, rigid-to-flexible transitions and other dynamic service points in dredging systems.

技术参数 | Technical Parameters

| 参数Parameter              | 规格Specification |
|--------------------------|-----------------|
| 型号Model                  | GS-DG28-EJ      |
| 公称通径Nominal Bore         | 100mm-1300mm    |
| 工作压力Working Pressure     | 0.5MPa-3.0MPa   |
| 真空度Vacuum Resistance     | -0.1MPa         |
| 法兰间距Face to Face         | 0.2m-1.0m       |
| 轴向补偿Axial Movement       | 50mm-150mm      |
| 横向位移Lateral Displacement | 25mm-100mm      |
| 角向偏转Angular Deflection   | ±10°            |

高压冲水管 | Jet Water Hose



高压冲水管 GS-DG29-JW  
Jet Water Hose GS-DG29-JW

疏浚设备高压冲洗工况 | High Pressure Flushing Service on Dredging Equipment

产品概述 | Product Overview

高压冲水管主要用于耙吸船拖头冲水系统、绞刀辅助冲洗系统及其他需要高压供水的疏浚设备单元，用于冲散沉积物、辅助松动介质并改善吸排效率。该类产品通常要求具备较高的耐压能力、良好的柔性和稳定的连接可靠性，以适应设备运动、海水环境和频繁启停带来的工况变化。

Jet water hose is typically used on draghead flushing systems, cutter support flushing systems and other dredging equipment that requires high-pressure water delivery. The hose is designed to combine pressure retention, flexibility and connection reliability so that it can perform under equipment movement, marine exposure and repeated start-stop flushing duty.

技术参数 | Technical Parameters

| 参数Parameter         | 规格Specification                              |
|---------------------|----------------------------------------------|
| 型号Model             | GS-DG29-JW                                   |
| 内径InsideDiameter    | 100mm-450mm                                  |
| 工作压力WorkingPressure | 2.5MPa                                       |
| 试验压力Test Pressure   | 3.75MPa                                      |
| 标准长度Standard Length | 10m-11.8m                                    |
| 输送介质Typical Medium  | 淡水 / 海水 Fresh Water / Seawater               |
| 连接形式End Connection  | 法兰 / 快速接头 Flange / Quick Coupling            |
| 外覆层Cover            | 耐候耐海水外胶 Weather and Seawater Resistant Cover |



漂浮疏浚管工况信息采集表 Floating Dredge Hose Information Collection Form

Please provide as much as you can for the best floating dredge hose design.  
为了更好的漂浮疏浚管设计，请尽可能全面填写如下信息。

1. Customer info(客户信息):

Customer / Company (客户/公司):

Project name(项目名称):

Contact person(联系人): Email / Tel:

2. Port and application field(港口以及应用领域):

Port / Area (港口/区域):

☐ Port dredging 港口疏浚 ☐ Channel dredging 航道疏浚 ☐ Land reclamation 吹填造地

☐ Mining / tailings 矿砂 / 尾矿 ☐ Others 其他

3. Location(位置及系统):

Location (位置):

☐ Offshore海上 ☐ River河道 ☐ Lake湖区 ☐ Nearshore近岸 ☐ Shore discharge岸上排放 ☐ Others其他

☐ CSD绞吸船 ☐ TSHD耙吸船 ☐ Dredge pump泥泵站 ☐ Barge / pontoon驳船/浮箱 ☐ Bow blowing艏喷

4. Environment Conditions(环境因素):

4.1Water depth(水深): (a)Wave height(波高期):

4.2Dredging depth (疏浚深度): (b)Wave period(波高):

4.3 Tidal range(潮汐变化): (c)Wind speed(风速):

4.4 Current speed (流速 / 海流): (d) Ambient temperature(环境温度):

5. Purpose(用途):

☐ Floating discharge漂浮排泥 ☐ Suction吸泥 ☐ Shore discharge岸上排放 ☐ Transition/Tapered过渡/锥形

☐ Jet water高压冲水 ☐ Expansion joint伸缩补偿

6. Medium (介质):

6.1 Medium type 介质种类

☐ Silt淤泥 ☐ Clay粘土 ☐ Sand砂 ☐ Gravel砾石 ☐ Coral珊瑚 ☐ Rock碎石 ☐ Ore / tailings矿砂 / 尾矿

6.2Specific gravity(密度): 6.5Max.particle size(最大颗粒):

6.3Solid concentration (固体浓度): 6.6Average particle size(平均颗粒):

6.4pH value (pH值): 6.7Slurry temperature(浆体温度):

7. Operating Conditions(工作工况):

7.1Working pressure(工作压力): 7.4Flow rate/capacity (流速/流量):

7.2Max. pressure(最大压力): 7.5Pump power/head(泵功率/扬程):

7.3Suction vacuum (吸入真空度): 7.6Operating hours/day(每天工作时长):

8. Hose Requirement(软管要求):

☐ Floating Discharge Hose漂浮排泥主管 ☐ Tapered/Half Floating Hose锥形/半漂浮过渡管

☐ Armored Floating Hose铠装漂浮管 ☐ Discharge Hose排泥管 ☐ Suction Hose吸泥管

☐ Armored Suction/Discharge Hose铠装吸排管 ☐ Jet Water Hose冲水管 ☐ Bow Blowing Hose Set艏喷管组

ID (内径): Length (长度): Quantity (数量):

Buoyancy reserve(浮力储备): Min. bend radius(最小弯曲半径): Wear layer(耐磨层):

Please complete as fully as possible to allow prompt quotation.  
请尽可能完整地填写如下信息，以便及时报价。

9. End Connection (端部连接):

9.1 Flange standard法兰标准 9.4 Flange material法兰材质

☐ ANSI ☐ DIN ☐ JIS ☐ PN ☐ Customer Spec客户要求 9.5 Bolt hole / PCD 螺栓孔/节圆

9.2 Flange pressure rating法兰压力等级 ☐ Fixed flange固定法兰 ☐ Swivel flange活套法兰

9.3 Flange face法兰面 ☐ Quick coupling快速接头

10. Hose String / Layout(软管串及布置):

10.1 Total pipeline length管线总长度

10.2 Floating hose string quantity 漂浮管串数量

☐ Floating pipeline漂浮管线 ☐ Sinker/submerged pipeline沉管/水下管线 ☐ Ship to shore船到岸

☐ Shore pipeline岸上管线 ☐ Temporary/movable临时/移动

10.3 Layout drawing / sketch布置图 / 草图

☐ Attached已提供 ☐ Required with BID招标书一起提交 ☐ Required when ordered下单时需要提供

11. Inspection (检测要求):

11.1 Hydrostatic test水压测试 ☐ Not Required 不需要第三方检测

11.2 Vacuum test真空测试 ☐ Required 需要第三方检测

11.3 Dimensional inspection尺寸检测 ☐ All hose所有胶管 ☐ Random test抽检

☐ At Customer's account 买家支付

☐ At Manufacturer's account 工厂支付

12. Package / Marking (包装与标识):

12.1 Package包装 ☐ Factory brand工厂品牌 ☐ Customer's brand客户商标

12.2 Color颜色 ☐ Serial number序列号 ☐ Direction mark流向标识

12.3 Reflective strip 反光条 ☐ Lifting mark吊装标识 ☐ Wear indicator耐磨指示层

13. Quotation / Delivery(报价及交货信息):

Date of inquiry询价日期 Required quotation date 报价日期

Required delivery date交货期 Destination交货地

☐ EXW With TAX ☐ FOB Tianjin / Qingdao ☐ CIF Port目的港

☐ US Dollar美金 ☐ Chinese RMB元 ☐ Others其他

14. Details(胶管详情):

| No | Description胶管描述 | Size尺寸 | Length长度 | Connection连接 | WP工作压力 | Quantity数量 | Remarks备注 |
|----|-----------------|--------|----------|--------------|--------|------------|-----------|
| 1  |                 |        |          |              |        |            |           |
| 2  |                 |        |          |              |        |            |           |
| 3  |                 |        |          |              |        |            |           |
| 4  |                 |        |          |              |        |            |           |
| 5  |                 |        |          |              |        |            |           |

15. Additional notes(其他备注):