

|  |  |  |  |
|--|--|--|--|
|  <p>SABIC FUJIAN<br/>SABIC FUJIAN Petrochemicals Co., Ltd.<br/>福建中沙石化有限公司</p> |  |  <p>中国寰球工程有限公司北京分公司<br/>CHINA HUANQIU CONTRACTING &amp; ENGINEERING (BEIJING) CO., LTD.</p> |  |
|  |  |  <p>中国寰球工程有限公司<br/>CHINA HUANQIU CONTRACTING &amp; ENGINEERING CO., LTD.</p>                |  |
| 项目名称: 福建古雷 150 万吨/年乙烯及下游深加工联合体项目<br>Project Name: Fujian Gulei 1.5MMTA Ethylene and Downstream Deep Processing Complex Project                                 |  |  |  |
| 装置名称: 全厂性工程<br>Unit Name: General  | 工程设计综合资质甲级<br>Comprehensive Design License | 证书编号 Certificate No.:<br>A111001011  |  |
| 文件编号 Document Number<br>SFP-0012-00-HQC-UGP-MRI-0007   |  | 页数 Page: 13  |  |

## 管道材料招标文件

### HDPE

## Bidding documents for HDPE

|            |                    |             |   |   |             |  |            |
|------------|--------------------|-------------|---|---|-------------|--|------------|
|            |                    |             |   |   |             |  |            |
|            |                    |             |  |  |             |  |            |
| CA         | Issued for Review  | 庞子涛         | 张晶  | 刘锴  |             |  | 2023/09/25 |
| 版次<br>REV. | 说 明<br>DESCRIPTION | 编制<br>PRE'D | 校核<br>CKD   | 审核<br>DISCAPP.  | 审定<br>APPR. |  | 日期<br>DATE |

本文件版权为中国寰球工程有限公司所有, 未经本公司许可不得转让或复制给第三者。

The copyright of this document is the property of CHINA HUANQIU CONTRACTING & ENGINEERING CO., LTD. (HQC) ,  
 Unauthorized disclosure or duplication to the third party is not permitted.

|   |  |
|---|--|
|  <p><b>SABIC FUJIAN</b><br/>SABIC FUJIAN Petrochemicals Co., Ltd.<br/>福建中沙石化有限公司</p> |  <p>中国寰球工程有限公司北京分公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING (BEIJING) CO.,LTD.</p> |
|   |  <p>中国寰球工程有限公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING CO., LTD.</p>              |
| <p>管道材料招标文件<br/>Bidding documents for piping material</p>   | <p>SFP-0012-00-HQC-UGP-MRI-0007</p>  |

## CONTENT

|   |    |
|---|----|
| 1. DEFINITION 定义.....   | 3  |
| 2. SCOPE OF VENDOR'S SUPPLY 厂商供货范围.....                             | 3  |
| 3. DESIGN REQUIREMENTS 设计要求.....                                    | 3  |
| 4. TECHNICAL REQUIREMENTS 技术要求.....                                 | 6  |
| 5. Dimension 尺寸.....  | 8  |
| 6. MARKING 标记.....  | 8  |
| 7. PERFORMANCE GUARANTEE 性能保证.....                                  | 9  |
| 8. SPARE PARTS AND SPECIAL TOOLS 备品备件及特殊工具.....                     | 10 |
| 9. RESPONSIBILITIES AND OBLIGATIONS 责任与职责.....                      | 10 |
| 10. INSPECTION AND TESTING 检验试验.....                                | 11 |
| 11. EXTERNAL PROTECTION, TRASPORTATION AND SHIPMENT 外防护, 运输及保护..... | 12 |
| 12. ATTACHMENT 附件:.....   | 13 |

|   |  |
|---|--|
|  <p><b>SABIC FUJIAN</b><br/>SABIC FUJIAN Petrochemicals Co., Ltd.<br/>福建中沙石化有限公司</p> |  <p>中国寰球工程有限公司北京分公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING (BEIJING) CO.,LTD.</p> |
|   |  <p>中国寰球工程有限公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING CO., LTD.</p>              |
| <p><b>管道材料招标文件</b><br/><b>Bidding documents for piping material</b></p>   | <p><b>SFP-0012-00-HQC-UGP-MRI-0007</b></p>   |

## 1. DEFINITION 定义

This supply specification for the plumbing plastic pipes & fittings covers specific purchase conditions relating to the request for inquiry or purchase order for Fujian Gulei 1.5MMTA Ethylene and Downstream Deep Processing Complex Project.

此给排水用塑料管及管件的供货要求涵盖了关于福建古雷 150 万吨/年乙烯及下游深加工联合体项目询价及采购的明确要求。

These requirements supplement the purchase descriptions and shall be part of the inquiry and purchase order.

这些要求补充了采购描述并应作为询价及采购订单的一部分。

## 2. SCOPE OF VENDOR'S SUPPLY 厂商供货范围

The scope shall include all labour, supervision, transportation, material, tools, supplies and services required to design, fabricate, assemble, inspect, test, pack and load the materials in accordance with this specification.

厂商供货的范围还包括此规定所包括的设计，制造，装配，检验，测试等所必需的劳动，管理，运输，原材料，工具等服务。

All material design, manufacture, inspection, testing and installation shall be performed in accordance with the applicable documents, international codes, CHINESE national codes, industry standards, and local statutory regulations mentioned in this specification.

所有材料的设计，检验，试验及安装还应遵循本规定中所提及的文档，国际标准，国家规定，工业标准及当地法律法规等。

## 3. DESIGN REQUIREMENTS 设计要求

### 3.1 GENERAL 总则

The specification covers minimum technical requirements for procurement of plastic pipes & fittings to be used for the project.

此规定涵盖了本项目所用塑料管及管件的最低技术要求。

Any requirements not covered by this specification are left to the Manufacturer and should be officially approved by purchaser.

本规定未涉及到的其他要求由制造商负责并通过买方的正式认可。

|   |   |
|---|---|
| <br><b>SABIC FUJIAN</b><br>SABIC FUJIAN Petrochemicals Co., Ltd.<br>福建中沙石化有限公司 |  中国寰球工程有限公司北京分公司<br><small>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING (BEIJING) CO.,LTD.</small> |
|   |  中国寰球工程有限公司<br><small>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING CO., LTD.</small>              |
| <b>管道材料招标文件</b><br><b>Bidding documents for piping material</b>   | <b>SFP-0012-00-HQC-UGP-MRI-0007</b>   |

## 3.2 APPLICABLE SPECIFICATION AND CODES 规定及标准

|                   |  |
|-------------------|--|
| ASME<br>B1.20.1   | Pipe thread<br>管螺纹   |
| ASME<br>B16.21    | Nonmetallic Flat Gaskets for Pipe Flange<br>管法兰用非金属平面垫片  |
| ASME<br>B18.31.2  | Continuous Thread Stud, Double-End Stud, and Flange Bolting Stud<br>连续螺纹螺柱、双头螺柱和法兰栓螺柱  |
| ASME<br>B18.2.2   | Nuts for General Application: Machine Screw Nuts, Hex, Square, Hex Flange, and Coupling Nuts(Inch Series)<br>螺母的一般要求：机械螺母，六角，方头，六角法兰和长螺栓（英制） |
| ISO 4227          | Plastics piping systems-Polyethylene(PE) pipes and fittings for water supply<br>给水用聚乙烯管道及管件（PE）  |
| API 600           | Steel Gate Valves-Flanged and Butt-welding Ends, Bolted Bonnets<br>钢制闸阀-法兰连接端和对焊端，螺栓连接阀盖   |
| ASTM<br>(various) | American Society for Testing Materials<br>美国试验及材料协会  |
| GB/T19472.2       | Polyethylene spirally enwound structure-wall pipes<br>聚乙烯缠绕结构壁管材   |

And all others codes, standards and specifications indicated in the DESCRIPTION of MTO, or in any reference document.

和所有在描述及材料表中所列的其他规定，标准，规范及参考文档。

Editions and/or issue dates of Codes, Standards and Specifications shall be the latest, unless otherwise specified.

|   |  |
|---|--|
|  <p><b>SABIC FUJIAN</b><br/>SABIC FUJIAN Petrochemicals Co., Ltd.<br/>福建中沙石化有限公司</p> |  <p>中国寰球工程有限公司北京分公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING (BEIJING) CO.,LTD.</p> |
|   |  <p>中国寰球工程有限公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING CO., LTD.</p>              |
| <p><b>管道材料招标文件</b><br/><b>Bidding documents for piping material</b></p>   | <p><b>SFP-0012-00-HQC-UGP-MRI-0007</b></p>   |

除非特别指定，所应用的标准规范均为最新版

Any conflict between the various requirements within, or attached to, this specification and the reference Codes, Standards and Specifications, shall be brought to purchaser attention for clarification.

对于此规定与其他参考规定，标准，规范中的不符之处，均应提交买方并进行澄清。

### 3.3 PRIORITY OF THE DOCUMENTATION 文档的权威性

In cases of conflict, the order of precedence for requisition documents shall be as follows:

如各文档中的要求产生矛盾，各文档的权威性应以下列顺序确定：

(1) The Purchase Order

采购订单

(2) Material Requisition

请购文件

(3) Purchaser's Specification (or Engineering Specification)

买方规定（或工程规定）

(4) International Codes and Industrial Standards (e.g. ASME, ASTM, etc)

国际规范和工业标准等

If the Vendor discovers any inconsistency or conflict within the documents comprising this specification and/or material requisition, the Vendor shall notify Purchaser in writing.

如卖方发现本规定中的要求与规范，请购文件及规定相矛盾的地方，应书面通知买方

### 3.4 DEVIATIONS AND ALTERNATIVES 偏离及替换

The Vendor shall notify Purchaser any deviations/ conflicts from the requisition that the vendor may propose/ discover. The details of the deviations/ conflicts must be specified in the TECHNICAL DEVIATION LIST

若卖方的供货有与此请购单中要求不一致处，应填写偏离表并将此偏离表附在其报价中。

|   |  |
|---|--|
|  <p><b>SABIC FUJIAN</b><br/>SABIC FUJIAN Petrochemicals Co., Ltd.<br/>福建中沙石化有限公司</p> |  <p>中国寰球工程有限公司北京分公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING (BEIJING) CO.,LTD.</p> |
|   |  <p>中国寰球工程有限公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING CO., LTD.</p>              |
| <p><b>管道材料招标文件</b><br/><b>Bidding documents for piping material</b></p>   | <p><b>SFP-0012-00-HQC-UGP-MRI-0007</b></p>   |

偏离表 DEVIATION LIST

| 请购单文件号<br>MR LIST | 页数<br>PAGE | 买方要求<br>PURCHASER'S<br>REQUIREMENT | 供货商建议<br>VENDOR'S<br>SUGGESTION | 备注<br>REMARK |
|-------------------|------------|------------------------------------|---------------------------------|--------------|
|                   |            |                                    |                                 |              |
|                   |            |                                    |                                 |              |
|                   |            |                                    |                                 |              |

4. TECHNICAL REQUIREMENTS 技术要求

1) Unless otherwise specified, the chemical composition and mechanical properties of pipes and fittings material shall conform to ISO4227 and relative other International codes or Chinese National standard GB.

除非特别规定，塑料管子管件所用材料的化学成分及力学性能应符合 ISO4227 及相应的国际标准和国内标准的要求。

2) All material shall be new material with all surface clean and free from defects, arc strike, dirt, sand, scale, paint or any other foreign substance.

所有材料都应当是新材料，表面清洁，没有缺陷，焊渣，锈迹，沙粒，油脂或其它异物。

3) The temperature limitation of plastic material shall designed be as follow. If a higher temperature is specified, the Vendor shall demonstrate that the materials are suitable for these design conditions.

塑料管子管件的使用温度应符合下表的规定，供货商应保证其所生产提供的管子管件符合下面的设计条件:

PP (聚丙烯) -29 to 100 °C

HDPE (高密聚乙烯) -29 to 100 °C

PVC (聚氯乙烯) -29 to 100 °C

4) The pipe strength shall comply with design pressure and buried depth requirement (The design pressure is 0.8Mpag and maximum soil cover depth is 3m in this project ). The vendor shall be responsible for the pipe strength verification and provide the calculation report.

|   |  |
|---|--|
|  <p><b>SABIC FUJIAN</b><br/>SABIC FUJIAN Petrochemicals Co., Ltd.<br/>福建中沙石化有限公司</p> |  <p>中国寰球工程有限公司北京分公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING (BEIJING) CO.,LTD.</p> |
|   |  <p>中国寰球工程有限公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING CO., LTD.</p>              |
| <p><b>管道材料招标文件</b><br/><b>Bidding documents for piping material</b></p>   | <p><b>SFP-0012-00-HQC-UGP-MRI-0007</b></p>   |

管道强度应满足管道设计压力及最大覆土深度条件(本项目管道最大覆土 3 米，设计压力 0.8Mpag)；供应商应对管道强度进行验算并提供计算报告。

5) Vendor shall submit to Purchaser the chart of the manufacturer's pressure-temperature rating for pipes and fittings.

卖方应于投标时提交塑料管子及管件的温压等级表以供买方进行确认。

6) Vendor will sent to HQC a detailed description of the joint method and recommendation for handling and application.

卖方应提交买方管线进行连接所需的方法,并提供与连接方法需要使用的必要的器械设备

7) The Vendor shall provide an Ultraviolet Protection Layer for all piping elements and will specify in the bid quantity and type of UV absorbers (only for underground plastic pipe) .

对于地下管网使用的塑料管及管件，供货商应提供紫外线保护层并于投标时在技术标书中说明其抗紫外线老化的能力。

8) The design service life for HDPE pipe is 50 years. Vendor shall specify in the bid the minimum operating life of the products.

本项目 HDPE 管道设计使用寿命为 50 年。卖方需要在标书中提供相应的管子管件的使用寿命。

9) Vendor will specify in the bid which kind of element if foreseen antistatic to avoid electrostatic charges.

卖方应于技术标书中说明其加入的抗静电元素的种类。

10) Vendor's raw material shall be selected from the following brands: Borouge HE3490LS、Basell CRP100、Sabic P6006、Sabic P6006AD

The material must be compound conforming to ISO 4427-1:2019. Separated black and white material is unacceptable

卖方对于原材料的牌号可以是：博禄 HE3490LS，巴塞尔 CRP100，沙比克 P6006、沙比克 P6006AD；原料必须是混配料并符合 ISO 4427-1:2019，不接受“黑白”料。

|  |  |
|--|--|
| <br>SABIC FUJIAN Petrochemicals Co., Ltd.<br>福建中沙石化有限公司 | <br>中国寰球工程有限公司北京分公司<br>CHINA HUANGQIU CONTRACTING & ENGINEERING (BEIJING) CO.,LTD. |
|  | <br>中国寰球工程有限公司<br>CHINA HUANGQIU CONTRACTING & ENGINEERING CO., LTD.               |
| 管道材料招标文件<br>Bidding documents for piping material  | SFP-0012-00-HQC-UGP-MRI-0007   |

## 5. Dimension 尺寸

1) Outside diameters and wall thickness of pipes shall be made in accordance with ASME B36.10M Or Relative GB standards, manufacturer' standard approved by HQCEC can be used also.

管子外径及壁厚尺寸应遵循标准 ISO 4427, 或应提请买方确认的制造厂标准

2) The allowance tolerance of outside diameter and wall thickness shall conform to relative International or Chinese National standard GB.

管壁厚及外径的偏差符合相应标准规范的要求。

3) Pipe unit length shall be in accordance with ISO-4227,if there is no requirement on the ISO, it is 12 meters a piece.

供货长度根据相关规范的要求, 如规范上无要求则为 12 米一根。

4) End preparation for pipes and fittings shall be in accordance with the relative material standard.

管子管件的端部应根据相关规范的要求

5) The face to face dimension for plastic fittings shall provided in the technical BID.

厂商在投标的技术标书中应提供其塑料管件的尺寸

6) Threaded end (TE) shall be provided with National standard Pipe Taper (NPT) conforming to ASME B1.20.1 or GB 12716.

螺纹端 (MT) 应按照 ASME B1.20.1 中 NPT (锥管螺纹) 加工。

## 6. MARKING 标记

Each pipe and fitting shall be legibly marked on the exterior surface of pipes in accordance with the applicable standard. Marking shall normally be accomplishing by stencilling and/or punching. The following shall be indicated on all pipes.

每根管子及每个管件应按相关标准进行标记, 标记应明显清晰容易辨认, 以下条款应当标记在管子外表面, 标记方法一般为模板喷刷或冲压。

- UNIT NO 装置代码
- Manufacturer's mark or name 制造厂标志或名称
- Codes and Standards 制造标准



|   |  |
|---|--|
|  <p><b>SABIC FUJIAN</b><br/>SABIC FUJIAN Petrochemicals Co., Ltd.<br/>福建中沙石化有限公司</p> |  <p>中国寰球工程有限公司北京分公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING (BEIJING) CO.,LTD.</p> |
|   |  <p>中国寰球工程有限公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING CO., LTD.</p>              |
| <p><b>管道材料招标文件</b><br/><b>Bidding documents for piping material</b></p>   | <p><b>SFP-0012-00-HQC-UGP-MRI-0007</b></p>   |

- |                              |               |
|------------------------------|---------------|
| - Grade and type of material | 材料等级及类型       |
| - Nominal diameter           | 公称口径          |
| - thickness or Rating        | 壁厚或压力等级       |
| - Item Code (In MTO)         | 元件代码(在 MTO 中) |
| - Heat No.                   | 炉批号           |
| - Date.                      | 制造日期          |

For pipes outside diameter up to 36mm, marking may be applied on at least 2 metal tags securely attached to each pipe package. However, material specification and item code shall be marking on the outer surface of individual pipe.

对于外径小于或等于 36mm 的管子，可以以捆为单位，每捆管子上附上牢靠的不少于两个金属标签并标记以上信息。但是，每单根管子的外表面都应标记上材料规格及元件代码。

For pipes outside diameter larger than 36mm, the information above should be marked on the outside surface of each pipe.

而对于外径大于 36mm 及以上管子，每根管上外表面都应包含以上信息。

## 7. PERFORMANCE GUARANTEE 性能保证

Vendor shall establish, document, implement and maintain a quality management system (QMS) as a means of ensuring that its product conforms to specified requirements including the requirements of ISO 9001:2000.

卖方应具有质量管理体系以确保其产品满足此规定及 ISO9001: 2000 的要求

Vendor shall submit its "Quality Manual" or "Proposed Quality Plan" complying with the requirements of ISO 9001 with its proposal for Purchaser's evaluation.

卖方应提交符合 ISO9001 要求的质量手册及质量控制计划供买方进行评估

When Vendor submits the "Proposed Quality Plan", Vendor shall define and document how Purchaser's requirements for quality will be met, and to be submitted within one month after the Placement of Order, to Purchaser for review and approval.

卖方应于订单下达后，提交质量控制计划并应定义如何满足买方的质量要求，供买方审核和认可。

|  |   |
|--|---|
| <br>SABIC FUJIAN Petrochemicals Co., Ltd.<br>福建中沙石化有限公司 | <br>中国寰球工程有限公司北京分公司<br>CHINA HUANGQIU CONTRACTING & ENGINEERING (BEIJING) CO.,LTD. |
|  | <br>中国寰球工程有限公司<br>CHINA HUANGQIU CONTRACTING & ENGINEERING CO., LTD.              |
| <b>管道材料招标文件</b><br><b>Bidding documents for piping material</b>  | <b>SFP-0012-00-HQC-UGP-MRI-0007</b>   |

When Vendor is obtaining a certification of approval for its QMS to be complied with the ISO 9001 by a certification body accredited by nationally recognized accreditation body, Vendor shall submit to Purchaser a copy of the "Certificate of Approval".

卖方应提交由国家认可的认证机构认证的 ISO9001 质量认证证书

The vendor is fully responsible for the quality assurance of their sub-vendor's activities.

卖方应对其分供货商的行为全权负责

Purchaser reserves the right to audit the vendor against the ISO 9001.

买方保留审查卖方违反 ISO9001 行为的权利。

It shall be noted that certification under ISO 9001 does not exempt the vendor from the requirement for the submission of the manual and Purchaser's right of quality audit.

卖方应注意：ISO9001 无法免除卖方需要满足买方质量审查的要求

Vendor should have a HSE policy statement and management plan.

卖方需具备 HSE 的政策声明及管理计划

#### 8. SPARE PARTS AND SPECIAL TOOLS 备品备件及特殊工具

Vendor shall furnish special tools and appurtenances necessary for the installation, maintenance and/or operation of pipes covered by the specification, if any.

如果需要，卖方应提供相关规定要求的安装，维护及操作所必须的特殊工具等。

#### 9. RESPONSIBILITIES AND OBLIGATIONS 责任与职责

For Vendor, all material design, manufacture, testing and installation shall meet the requirement in this specification.

对卖方，所有材料的设计，制造，试验及安装应满足本规定的要求。

Purchaser's comments do not relieve in any case Vendor from his responsibilities.

无论什么情况，买方的注释注解无法减轻卖方的责任

Purchaser will not be held responsible of any consequence out coming from misinterpretation or missing respect of here indicated instructions, there including any

|   |  |
|---|--|
|  <p><b>SABIC FUJIAN</b><br/>SABIC FUJIAN Petrochemicals Co., Ltd.<br/>福建中沙石化有限公司</p> |  <p>中国寰球工程有限公司北京分公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING (BEIJING) CO.,LTD.</p> |
|   |  <p>中国寰球工程有限公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING CO., LTD.</p>              |
| <p><b>管道材料招标文件</b><br/><b>Bidding documents for piping material</b></p>   | <p><b>SFP-0012-00-HQC-UGP-MRI-0007</b></p>   |

action should be required on Vendor' side to fully comply with his contractual obligations.

买方对于卖方对于本规定规定条款的误解及推理，及其产生的行为不负任何责任。

## 10. INSPECTION AND TESTING 检验试验

### GENNERAL 总则

1) Vendor shall conduct shop tests and inspections in accordance with approved INSPECTION AND TEST PLAN.

卖方应根据买方认可的检验试验计划进行检验及试验

2) All pipes prepared for purchaser inspection shall have passed a preliminary inspection made by the Manufacturer's Quality Control Department.

所有供卖方检验的管子应先经过制造商质检控制部门的检验

3) All inspection, examination and tests, and workmanship of individual piping material shall comply with the basic requirements of the applicable material and specifications, except as modified or as added in this specification.

每种管道材质的所有检验试验应完全符合相关规定及材料标准，除非本规定特殊指明。

4) Manufacturing data and records, such as mill test reports or certificates, radiographs, results of the other non-destructive examinations, visual examinations, and records of dimensional inspection shall be available for examination by purchaser and/or it's representative.

所有的检验数据及记录例如车间试验报告，射线探伤及其他无损检验结果，外观检验记录，尺寸检验记录等都应备案以备买方或其代表的检查。

5) The purchaser's Inspector reserves the right to carry out any check test in order to verify the certified values in case of doubt or dispute concerning the results obtained. If the results not according to the specifications; test costs shall be at the Vendor's charge.

对于卖方提供的检验数据，买方检验人员保留利用任何检验以验证卖方提供的检验数据真实性，若检验数据不满足本规定的要求，检验费用由卖方承担。

### 10.1 MATERIAL INSPECTION 材质检验

Chemical and mechanical characteristics, diagrams of any heat treatment shall be according to those provided in the relevant Codes, Standards and Specifications.

|   |  |
|---|--|
|  <p><b>SABIC FUJIAN</b><br/>SABIC FUJIAN Petrochemicals Co., Ltd.<br/>福建中沙石化有限公司</p> |  <p>中国寰球工程有限公司北京分公司<br/>CHINA HUANGLIU CONTRACTING &amp; ENGINEERING (BEIJING) CO.,LTD.</p> |
|   |  <p>中国寰球工程有限公司<br/>CHINA HUANGLIU CONTRACTING &amp; ENGINEERING CO., LTD.</p>              |
| <p><b>管道材料招标文件</b><br/><b>Bidding documents for piping material</b></p>   | <p><b>SFP-0012-00-HQC-UGP-MRI-0007</b></p>   |

材质的化学成分，力学性能，热处理曲线应满足相关标准，规范及规定的要求。

#### 10.2 VISUAL INSPECTION 外观检验

Surfaces shall be sound, clean and free of flaws, cracks, ridges and others defects judged unacceptable by the Inspector and/or as per the applicable standards.

管子表面应当圆滑清洁，无缺陷，裂纹,皱折及其它异物。是否符合要求应由买方检验人员决定，或根据相关标准。

#### 10.3 DIMENSION INSPECTION 尺寸检验

Tolerances in dimensions shall be according to the relevant Codes, Standards and Specifications.

尺寸公差应满足相应标准，规范及规定的要求

In particular, the following shall be checked:

下列尺寸应被检验:

Thickness 厚度

Diameters 外径

- end Dimensions 连接端部的尺寸
- other dimensions according to standards 标准中规定的其他尺寸

#### 10.4 Marking inspection 标记检验

Marking shall comply with Chap 6 of this specification.

标记检验应根据本规定第 6 章进行检验

#### 10.5 Hydrostatic Test 静水压力试验

A hydrostatic test shall be carried out on each pipe and fitting according to the relevant Codes, Standards and Specifications. , hydrostatic test pressure shall be at 1.5 times the pressure class rating if the standards not stated.

应按照相应标准的要求和压力对每根管子进行逐根的水压试验。当标准中对水压试验压力没有规定时，应按照管子额定压力的 1.5 倍进行水压试验。

#### 11. EXTERNAL PROTECTION, TRASPORATION AND SHIPMENT 外防护，运输及保护

Unless otherwise specified, the following measure to prevented corrosion and mechanical damage during transportation, shipment and storage shall be performed:

|   |  |
|---|--|
|  <p><b>SABIC FUJIAN</b><br/>SABIC FUJIAN Petrochemicals Co., Ltd.<br/>福建中沙石化有限公司</p> |  <p>中国寰球工程有限公司北京分公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING (BEIJING) CO.,LTD.</p> |
|   |  <p>中国寰球工程有限公司<br/>CHINA HUANGQIU CONTRACTING &amp; ENGINEERING CO., LTD.</p>              |
| <p><b>管道材料招标文件</b><br/><b>Bidding documents for piping material</b></p>   | <p><b>SFP-0012-00-HQC-UGP-MRI-0007</b></p>   |

除非特殊指定，为防止运输，储存过程中的腐蚀和损坏，下列措施应被采用：

1) In general, all pipes shall be thoroughly cleaned of all debris, trash, weld spatter, loose mill scale, tools and foreign matter and dried in preparation for shipment

一般而言，所有管材在运输前均应进行彻底的清洁，去除碎片，焊渣，杂质等

2) Pipes shall be protected to withstand ocean/road transit and extended periods of storage at the job site for a minimum period of 18 months. Materials shall be protected to safeguard against all adverse environments, such as: humidity, moisture, rain, dust, sand, mud, salt, air, salt spray and seawater.

管子应采取相应措施进行保护，保护措施应能抵挡海路及陆路运输所可能遇到的各种腐蚀，并最小维持到场储存 18 个月，卖方应采取相应措施应付储存运输时可能遇到的各种不利环境：如潮湿，雨天，沙尘，海洋等。

3) End of pipes shall be coated by wood or heavy duty plastic cap cover.

管子端部应采用木质或厚实的塑料盖板进行保护。

4) pipes and fittings shall be protected from uv attack during shipment or storage.

管子管件在运输及储存过程中应采取适当的措施保护以避免紫外线引起的老化

**12. ATTACHMENT 附件：**

|  | Code | Type  | Spec   | DN1 (in) | DN2 (in) | ItemCode  | Description   | QTY    | Unit | Remark |
|--|------|-------|--------|----------|----------|-----------|---|--------|------|--------|
|  | IWL  | PIP   | L91PE0 | 36       | 36       | PPNMP0321 | NON-METALLIC PIPE, GB/T 13663, PE100, EXTRUSION, PE x SW SDR 13.6 | 42.4   | m    |        |
|  | IWL  | PIP   | L91PE0 | 28       | 28       | PPNMP0321 | NON-METALLIC PIPE, GB/T 13663, PE100, EXTRUSION, PE x SW SDR 13.6 | 1242.9 | m    |        |
|  | IWL  | PIP   | L91PE0 | 24       | 24       | PPNMP0321 | NON-METALLIC PIPE, GB/T 13663, PE100, EXTRUSION, PE x SW SDR 13.6 | 130.6  | m    |        |
|  | IWL  | PIP   | L91PE0 | 20       | 20       | PPNMP0321 | NON-METALLIC PIPE, GB/T 13663, PE100, EXTRUSION, PE x SW SDR 13.6 | 2124.4 | m    |        |
|  | IWL  | PIP   | L91PE0 | 14       | 14       | PPNMP0321 | NON-METALLIC PIPE, GB/T 13663, PE100, EXTRUSION, PE x SW SDR 13.6 | 12.55  | m    |        |
|  | IWL  | E90   | L91PE0 | 28       | 28       | PNEAA0421 | 90 ELBOW, GB/T 13663.2, PE100, SW SDR 13.6                        | 26     | pc   |        |
|  | IWL  | E90   | L91PE0 | 24       | 24       | PNEAA0421 | 90 ELBOW, GB/T 13663.2, PE100, SW SDR 13.6                        | 5      | pc   |        |
|  | IWL  | E90   | L91PE0 | 20       | 20       | PNEAA0421 | 90 ELBOW, GB/T 13663.2, PE100, SW SDR 13.6                        | 22     | pc   |        |
|  | IWL  | E45   | L91PE0 | 20       | 20       | PNEBA0421 | 45 ELBOW, GB/T 13663.2, PE100, SW SDR 13.6                        | 2      | pc   |        |
|  | IWL  | 90TRE | L91PE0 | 36       | 28       | PNTER0821 | REDUCING TEE, GB/T 13663.2, PE100, SW SDR 13.6 x SDR 13.6         | 1      | pc   |        |
|  | IWL  | 90TRE | L91PE0 | 28       | 24       | PNTER0821 | REDUCING TEE, GB/T 13663.2, PE100, SW SDR 13.6 x SDR 13.6         | 1      | pc   |        |
|  | IWL  | 90TRE | L91PE0 | 28       | 14       | PNTER0821 | REDUCING TEE, GB/T 13663.2, PE100, SW SDR 13.6 x SDR 13.6         | 1      | pc   |        |
|  | IWL  | REDC  | L91PE0 | 36       | 28       | PNREC0741 | REDUCER CON., GB/T 13663.2, PE100, SW SDR 13.6 x SDR 13.6         | 1      | pc   |        |
|  | IWL  | REDC  | L91PE0 | 28       | 20       | PNREC0741 | REDUCER CON., GB/T 13663.2, PE100, SW SDR 13.6 x SDR 13.6         | 1      | pc   |        |
|  | IWL  | FLG   | L91PE0 | 36       | 36       | PFMLJ0041 | LJ FLANGE, HG/T 20592(A), NB/T 47008-20 II, PN10, FFLFE           | 1      | pc   |        |

|  | Code | Type  | Spec   | DN1 (in) | DN2 (in) | ItemCode  | Description   | QTY    | Unit | Remark |
|--|------|-------|--------|----------|----------|-----------|---|--------|------|--------|
|  | IWL  | FLG   | L91PE0 | 20       | 20       | PFMLJ0041 | LJ FLANGE, HG/T 20592(A), NB/T 47008-20 II, PN10, FFLFE                         | 2      | pc   |        |
|  | IWL  | GSK   | L91PE0 | 20       | 20       | PGNFG0027 | N-META. FLAT GASKET, HG/T 20606, HG/T 20592(A), QB/T 3625-PTFE, PN10, FF, 1.5mm | 2      | pc   |        |
|  | RUD  | PIP   | L91PE0 | 20       | 20       | PPNMP0321 | NON-METALLIC PIPE, GB/T 13663, PE100, EXTRUSION, PE x SW SDR 13.6               | 3154.1 | m    |        |
|  | RUD  | PIP   | L91PE0 | 16       | 16       | PPNMP0321 | NON-METALLIC PIPE, GB/T 13663, PE100, EXTRUSION, PE x SW SDR 13.6               | 1125.3 | m    |        |
|  | RUD  | PIP   | L91PE0 | 14       | 14       | PPNMP0321 | NON-METALLIC PIPE, GB/T 13663, PE100, EXTRUSION, PE x SW SDR 13.6               | 1      | m    |        |
|  | RUD  | PIP   | L91PE0 | 10       | 10       | PPNMP0321 | NON-METALLIC PIPE, GB/T 13663, PE100, EXTRUSION, PE x SW SDR 13.6               | 20     | m    |        |
|  | RUD  | PIP   | L91PE0 | 6        | 6        | PPNMP0321 | NON-METALLIC PIPE, GB/T 13663, PE100, EXTRUSION, PE x SW SDR 13.6               | 30     | m    |        |
|  | RUD  | E90   | L91PE0 | 20       | 20       | PNEAA0421 | 90 ELBOW, GB/T 13663.2, PE100, SW SDR 13.6                                      | 41     | pc   |        |
|  | RUD  | E90   | L91PE0 | 16       | 16       | PNEAA0421 | 90 ELBOW, GB/T 13663.2, PE100, SW SDR 13.6                                      | 21     | pc   |        |
|  | RUD  | E45   | L91PE0 | 20       | 20       | PNEBA0421 | 45 ELBOW, GB/T 13663.2, PE100, SW SDR 13.6                                      | 2      | pc   |        |
|  | RUD  | E45   | L91PE0 | 6        | 6        | PNEBA0421 | 45 ELBOW, GB/T 13663.2, PE100, SW SDR 13.6                                      | 2      | pc   |        |
|  | RUD  | 90TRE | L91PE0 | 20       | 14       | PNTER0821 | REDUCING TEE, GB/T 13663.2, PE100, SW SDR 13.6 x SDR 13.6                       | 1      | pc   |        |
|  | RUD  | 90TRE | L91PE0 | 20       | 10       | PNTER0821 | REDUCING TEE, GB/T 13663.2, PE100, SW SDR 13.6 x SDR 13.6                       | 1      | pc   |        |
|  | RUD  | REDC  | L91PE0 | 20       | 16       | PNREC0741 | REDUCER CON., GB/T 13663.2, PE100, SW SDR 13.6 x SDR 13.6                       | 1      | pc   |        |
|  | RUD  | FLG   | L91PE0 | 16       | 16       | PFMLJ0041 | LJ FLANGE, HG/T 20592(A), NB/T 47008-20 II, PN10, FFLFE                         | 2      | pc   |        |

|  | Code | Type | Spec   | DN1 (in) | DN2 (in) | ItemCode  | Description   | QTY | Unit | Remark |
|--|------|------|--------|----------|----------|-----------|---|-----|------|--------|
|  | RUD  | GSK  | L91PE0 | 16       | 16       | PGNFG0027 | N-META. FLAT GASKET, HG/T 20606, HG/T 20592(A), QB/T 3625-PTFE, PN10, FF, 1.5mm | 2   | pc   |        |