

SENMAI
Clean Special
Materials



森脉洁净特材
助力于半导体产业
的发展！



半导体级EP & BA无缝精密管 EP母管

助力于半导体产业的发展！
Help the development of semiconductor industry!



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SEMMAI
Clean Special Materials



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助力于半导体产业的发展

Help the development of semiconductor industry!



浙江森脉洁净特材有限公司（永电控股集团全资子公司），创立于 2001 年，公司位于浙江省温州市龙湾区高新技术园区，公司注册资本 12200 万元，占地面积 20000 平方米，公司深耕不锈钢行业积累 20 多年的专业经验，现已发展成为一家专业生产超洁净不锈钢精密钢管的专精特新型企业。公司配备由资深工程师和行业高技术人才组成的专业团队，紧跟市场需求，不断推出高品质、超洁净不锈钢精密钢管，产品广泛应用于半导体业、光电、新能源，生物 BPE, 特气等行业的管道输送系统。公司目前配置精轧精拉生产线 10 余条，电解设备 6 条，引进国外先进设备光亮退火炉，矫直机，内外精抛机，ECT 涡流和超声探伤仪等高端仪器，并配备高等级无尘室。每年可生产不锈钢超洁净 BA&EP 精密管总计约 300 万米，公司生产的原材料按行业标准元素数据提供给国内知名冶炼钢厂委托定炼，保证母材材质的可靠性及稳定性，是国内屈指可数的前端干预严格控制从开胚精轧精拉到电解的超洁净精密钢管制造企业。秉承公司使命：助力于半导体产业的发展和成为超洁净精密钢管国产替代的践行者为愿景，在超洁净精密产品研发上不断创新突破，追求卓越，精益求精，为客户提供稳定高端品质的产品。

Zhejiang Senmai Clean Special Materials Co., LTD. (wholly-owned subsidiary of Yongdian Holding Group), founded in 2001, the company is located in Wenzhou Longwan District High-tech Park, Zhejiang Province, the company registered capital of 122 million yuan, covers an area of 20,000 square meters, the company has accumulated more than 20 years of professional experience in stainless steel industry. Has developed into a professional production of ultra-clean stainless steel precision pipe specialized technology enterprises.

The company is equipped with a professional team composed of senior engineers and industry high-tech talents, keep up with the market demand, and continue to introduce high-quality, ultra-clean stainless steel precision pipe, products are widely used in semiconductor industry, photoelectric, new energy, biological BPE, special gas and other industries of pipeline transportation system.

At present, the company is equipped with more than 10 finishing rolling and drawing production lines, 6 electrolytic equipment, the introduction of foreign advanced equipment bright annealing furnace, straightening machine, internal and external finishing machine, ECT eddy current and ultrasonic flaw detector and other high-end instruments, and equipped with high-grade clean room. Each year can produce stainless steel ultra-clean BA&EP precision pipe total of about 3 million meters, the company's production of raw material masterbatch according to industry standard element data provided to domestic well-known smelting mills commissioned to set, to ensure the reliability and stability of the base material, is one of the few domestic front-end intervention strictly controlled from the embryo fine rolling fine pull to electrolysis of ultra-clean precision steel pipe manufacturing enterprises.

Adhering to the company's mission: to help the development of the semiconductor industry and become the practitioner of the domestic replacement of ultra-clean precision steel pipe for the vision, in the ultra-clean precision product research and development of innovation and breakthrough, the pursuit of excellence, excellence, to provide customers with stable high-end quality products.





企业愿景 Company Vision

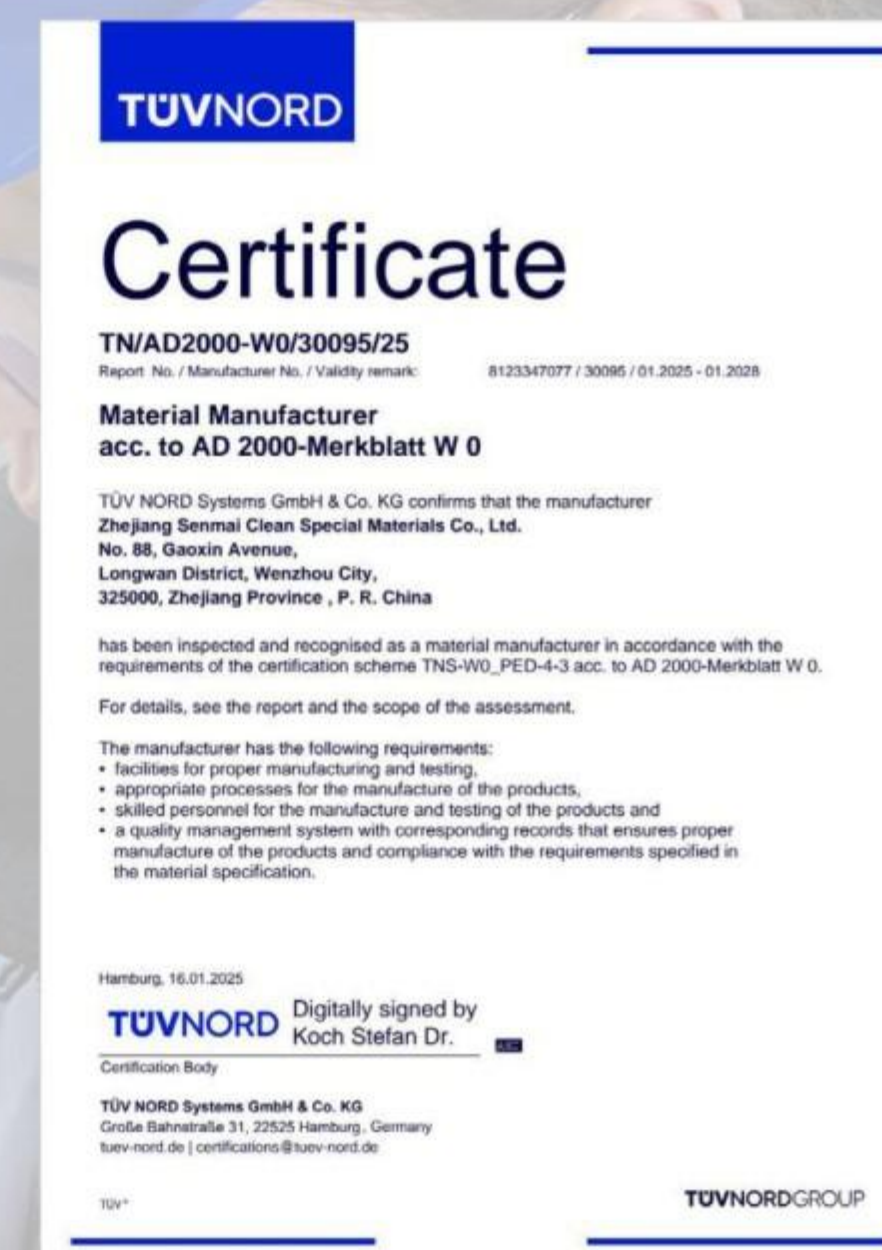
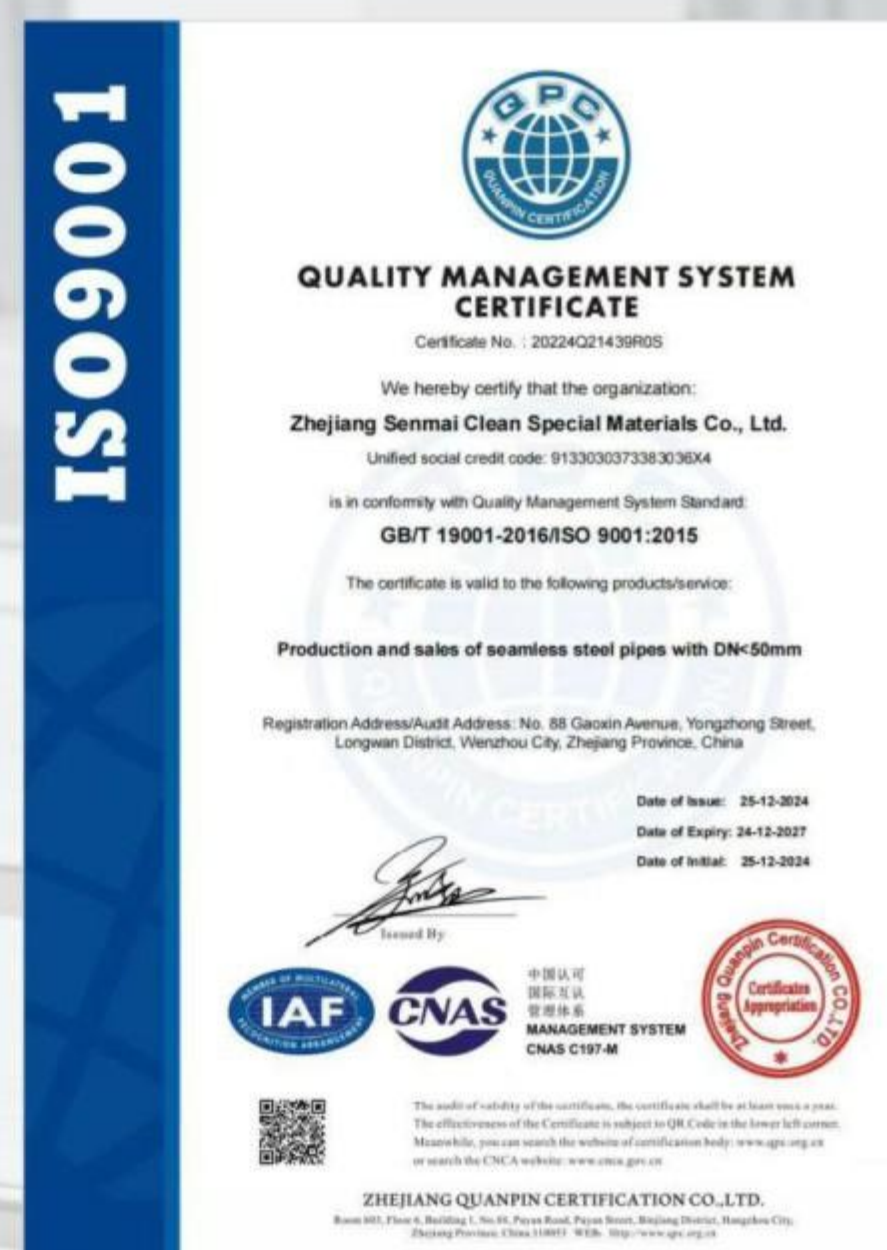
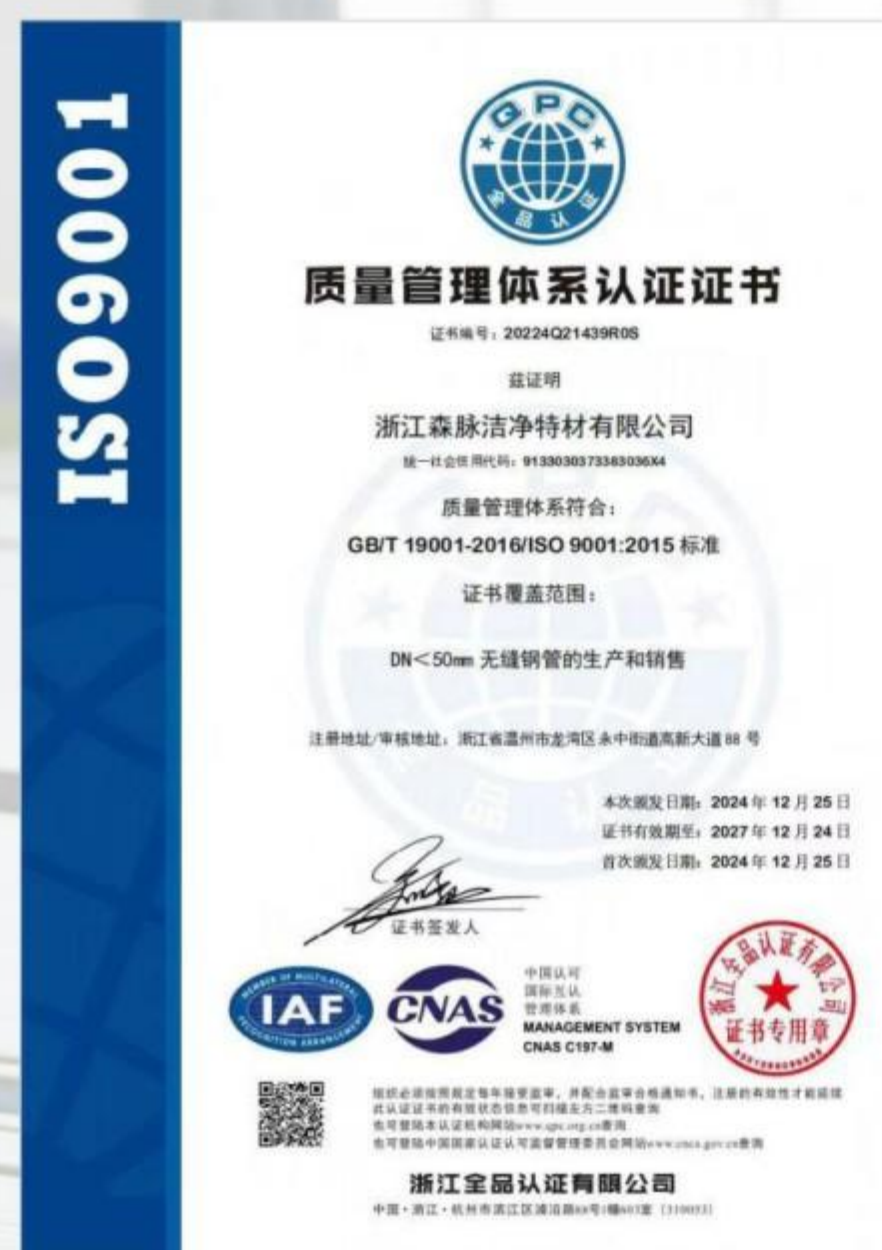
秉承公司使命：助力于半导体产业的发展和成为超洁净精密钢管国产替代的践行者为愿景，在超洁净精密产品研发上不断创新突破，追求卓越，精益求精，为客户提供稳定高端品质的产品。

Adhering to the company's mission of supporting the development of the semiconductor industry and becoming a practitioner of domestic substitution for ultra clean precision steel pipes, we continuously innovate and break through in the research and development of ultra clean precision products, pursue excellence, strive for perfection, and provide customers with stable high-end quality products.

创新 Innovation

实施创新驱动，自主创新与技术引进、消化、吸收、改进相结合，提升企业科技创新能力，增强企业发展竞争力。

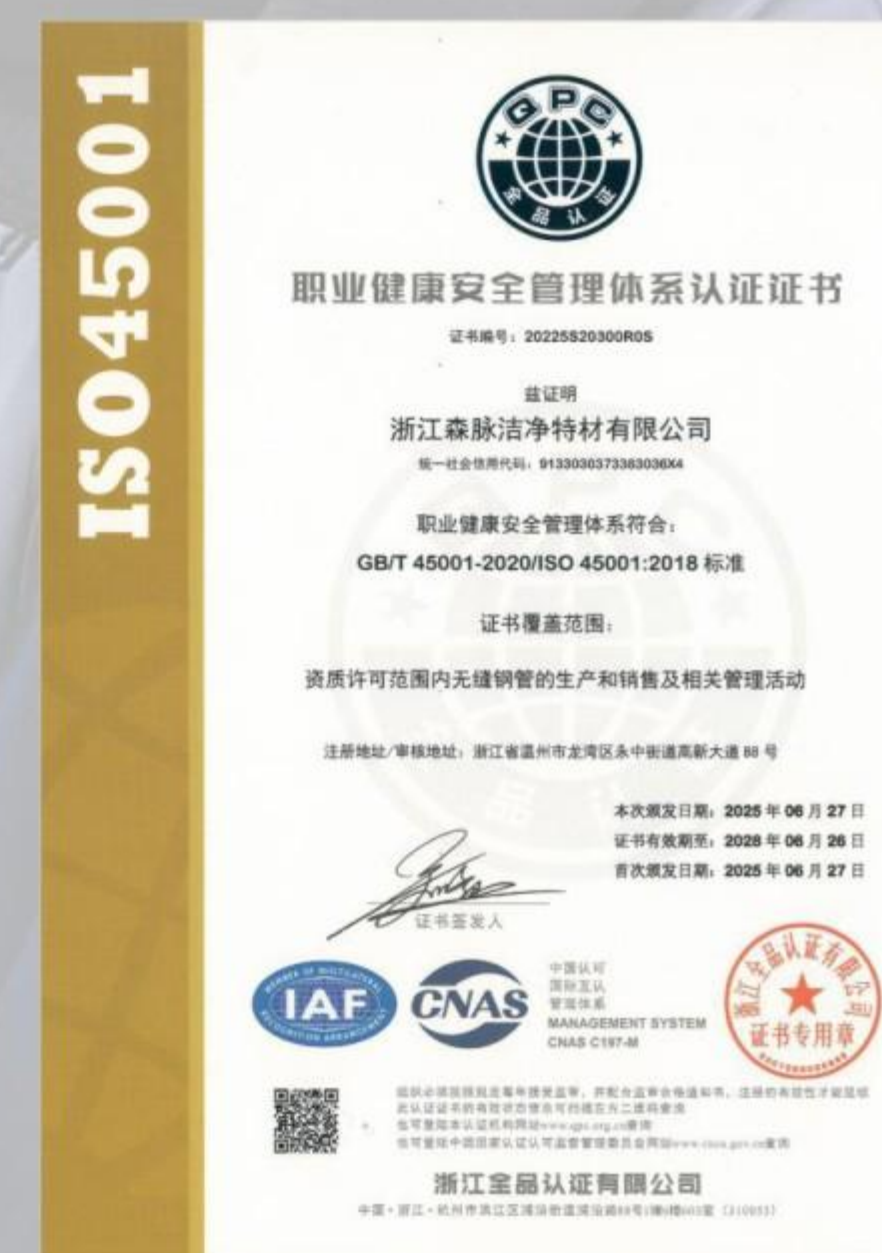
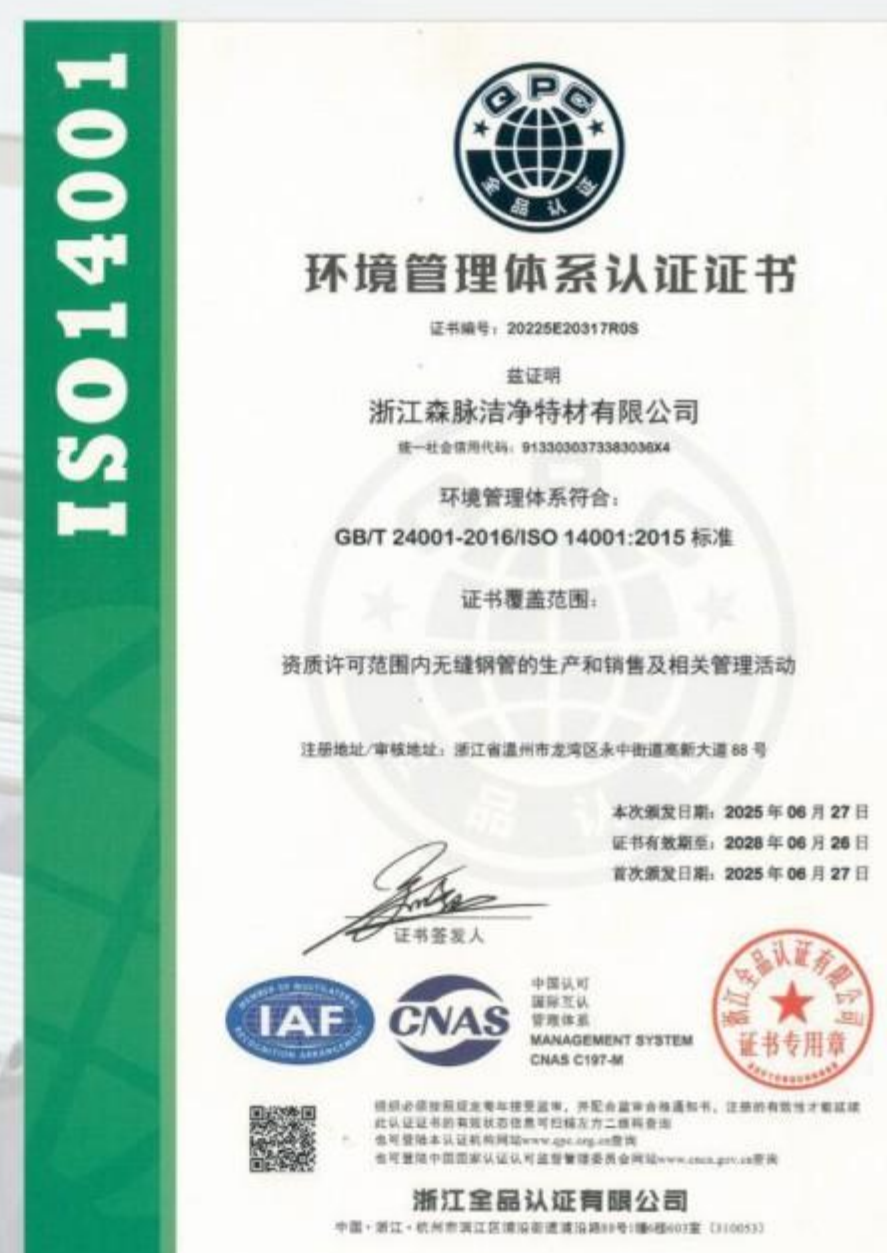
The implementation of innovation-driven, independent innovation and technology introduction, digestion, absorption, improvement of the combination, enhance the scientific and technological innovation ability of enterprises, enhance the competitiveness of enterprise development.



资质荣誉

在竞争激烈的商业环境中，森脉洁净特材凭借自主创新与技术引进等有机结合的模式，全方位提升了科技创新能力，获各界赞誉认可。

多年来，连续荣获多项资质荣誉，是过往创新耕耘的肯定，更是未来奋进的动力，激励我们坚持创新驱动，提升能力，为客户提供更好产品与服务。





中华人民共和国
特种设备生产许可证
Production License of Special Equipment
People's Republic of China

编号: TS2733S92-2029

单位名称: 浙江森脉洁净特材有限公司
住 所: 浙江省温州市龙湾区永中街道高新大道88号
制造地址: 浙江省温州市龙湾区永中街道高新大道88号

经审查, 获准从事以下特种设备生产活动:

许可项目	许可子项目	许可参数	备注
压力管道元件制造	压力管道管子(B)	—	限无缝钢管, 具体产品范围见型式试验证书。

发证机关: 浙江省市场监督管理局 (发证机关公章)
有效期至: 2029年4月23日 发证日期: 2025年4月24日

副本

证书号第7916965号

发明专利证书

发明名称: 一种不锈钢管内壁电解抛光设备及其加工方法

专利权人: 浙江森脉洁净特材有限公司

地 址: 325024 浙江省温州市龙湾区永中街道高新大道88号

发 明 人: 项庆强; 周鹏翔; 叶锋; 季小兵

专 利 号: ZL 2025 1 0054899.3 授权公告号: CN 119491293 B

专利申请日: 2025年01月14日 授权公告日: 2025年05月02日

申请日时申请人: 浙江森脉洁净特材有限公司

申请日时发明人: 项庆强; 周鹏翔; 叶锋; 季小兵

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局长 申长雨 (局长公章)
2025年05月02日

第1页(共1页)

浙江省国产涉及饮用水卫生安全
产品卫生许可批件

共2页 第1页

产品名称	SENMAI牌纯净水用不锈钢管衬
产品类别	输配水设备
产品规格或型号	公称通径DN≥6mm
申请单位	浙江森脉洁净特材有限公司
申请单位地址	浙江省温州市龙湾区永中街道高新大道88号
实际生产企业	浙江森脉洁净特材有限公司
实际生产企业地址	浙江省温州市龙湾区永中街道高新大道88号
审批结论	经审查, 该产品符合《生活饮用水卫生监督管理办法》的相关规定, 准予批准。
批准文号	浙(05)卫水字(2025)第0050号
批准日期	2025年5月19日
批件有效期	截至2029年6月18日
备注	1. 如果涉及多个生产场所, 应当分别取得每个生产场所的卫生许可批件。 2. 本批件只适用于批准内容(产品类别、规格、型号、申请单位、实际生产企业), 超出批准范围的生产行为, 视为无证生产。 3. 批件有效期内, 申请人应当按照《生活饮用水卫生监督管理办法》的要求, 加强质量管理, 确保产品质量。

浙江省卫生健康委员会
二〇二五年六月十九日

请于批件有效期届满30个工作日之前提出延续申请。

BA/EP管生产流程 BA/EP Pipe Production Process





精准控制流程，确保万无一失！ Precisely control the process to ensure foolproof results.

森脉洁净特材秉持严谨态度与科学方法，对生产超洁净管材的各流程实施精准控制，以满足半导体行业的超高产品要求。从母管原材料到机械研磨、光亮退火等环节，皆坚持精准精益生产。

精准控制流程是持续动态优化的过程，会随外部环境、业务拓展及新技术涌现，定期复盘评估，从简化流程、更新标准、升级监控手段等多方面提升其精准性与有效性，以适应新的要求。

为此，森脉人会定期开展培训，让全员明晰工作方向与步骤；并借助先进信息技术与完善管理机制，动态跟踪各环节进展，收集、分析关键指标来优化生产流程，以求在激烈竞争中达成更高目标。

Senmai Clean Special Materials adopts a rigorous and scientific approach to precisely control the production processes of ultra-clean pipes to meet the semiconductor industry's high requirements. It practices precise and lean production from the raw materials of mother pipes to processes like mechanical grinding and bright annealing.

As the precise control process requires continuous dynamic optimization, it will be regularly reviewed and evaluated with external changes, business expansion and new technologies. Its precision and effectiveness are enhanced by simplifying processes, updating standards and upgrading monitoring means to adapt to new requirements.

Senmai's staff conduct regular training to clarify work directions and steps for employees. They also use advanced IT and a sound management mechanism to track process progress, collect and analyze key indicators to optimize production, aiming for higher goals in fierce competition.



生产设备 Production Equipment





SEMI
Clean Special

检测设备 Detection Equipment



金相检测
Metallographic examination



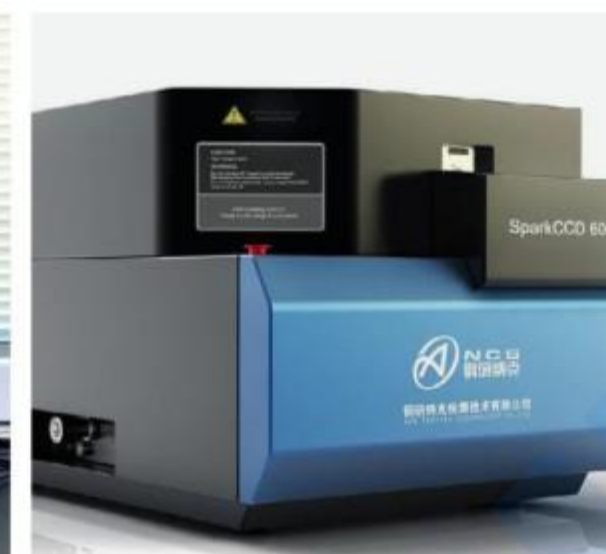
颗粒仪
Particle analyzer



超声波壁厚仪
Ultrasonic wall thickness gauge



粗糙度分析仪
Roughness analyzer



光谱仪
Spectrograph



拉申试验机
Rashen testing machine



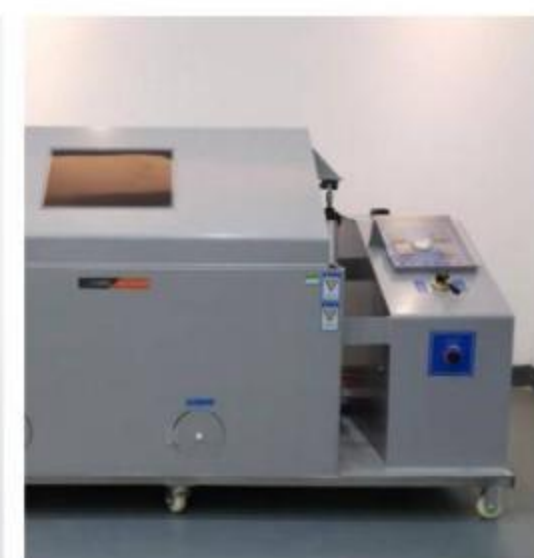
硬度仪
Hardness tester



内窥镜
Endoscope



油脂残留分析仪
Oil residue analyzer



盐雾测试仪
Salt spray tester



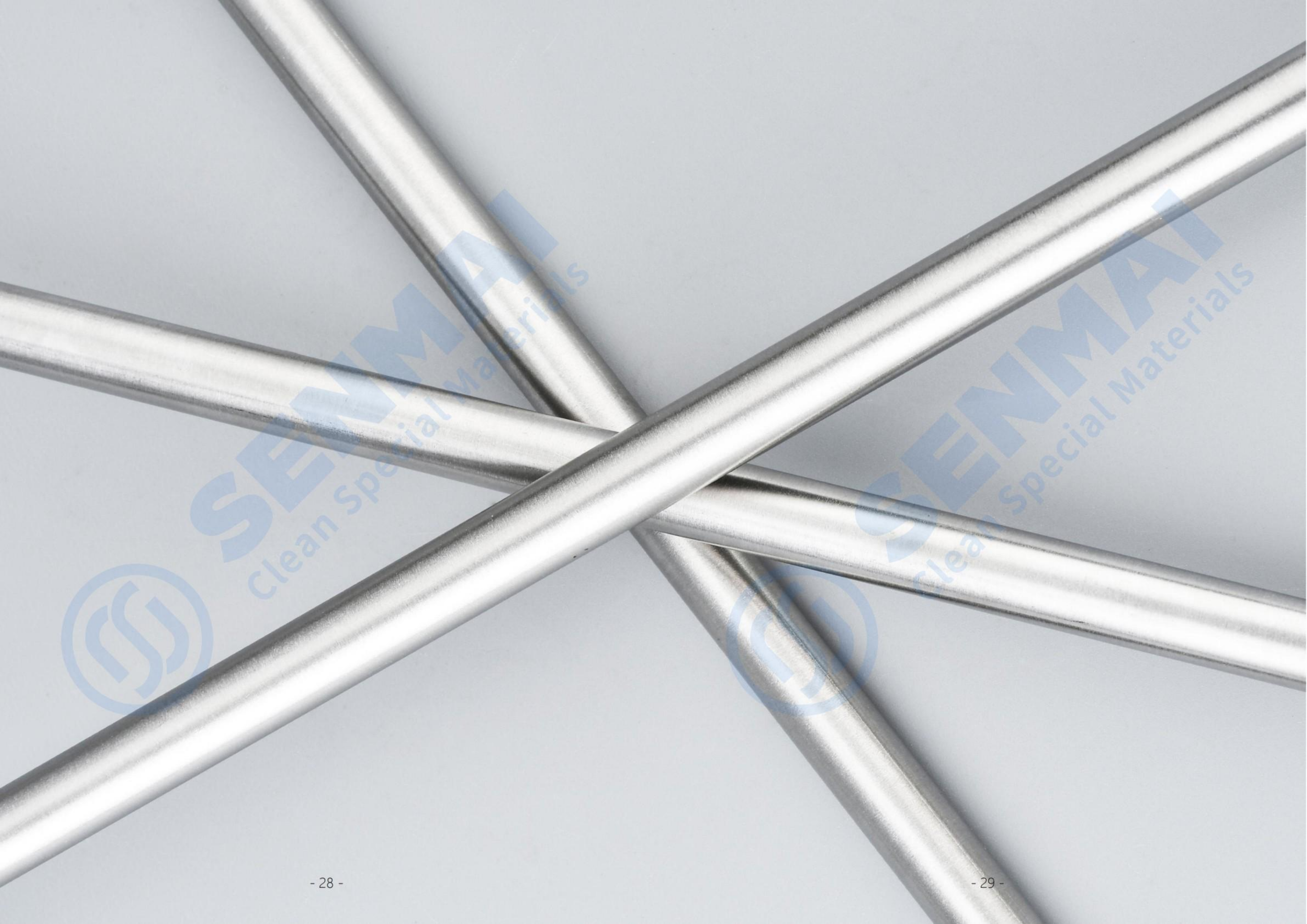
剖面分析仪
Profile analyzer

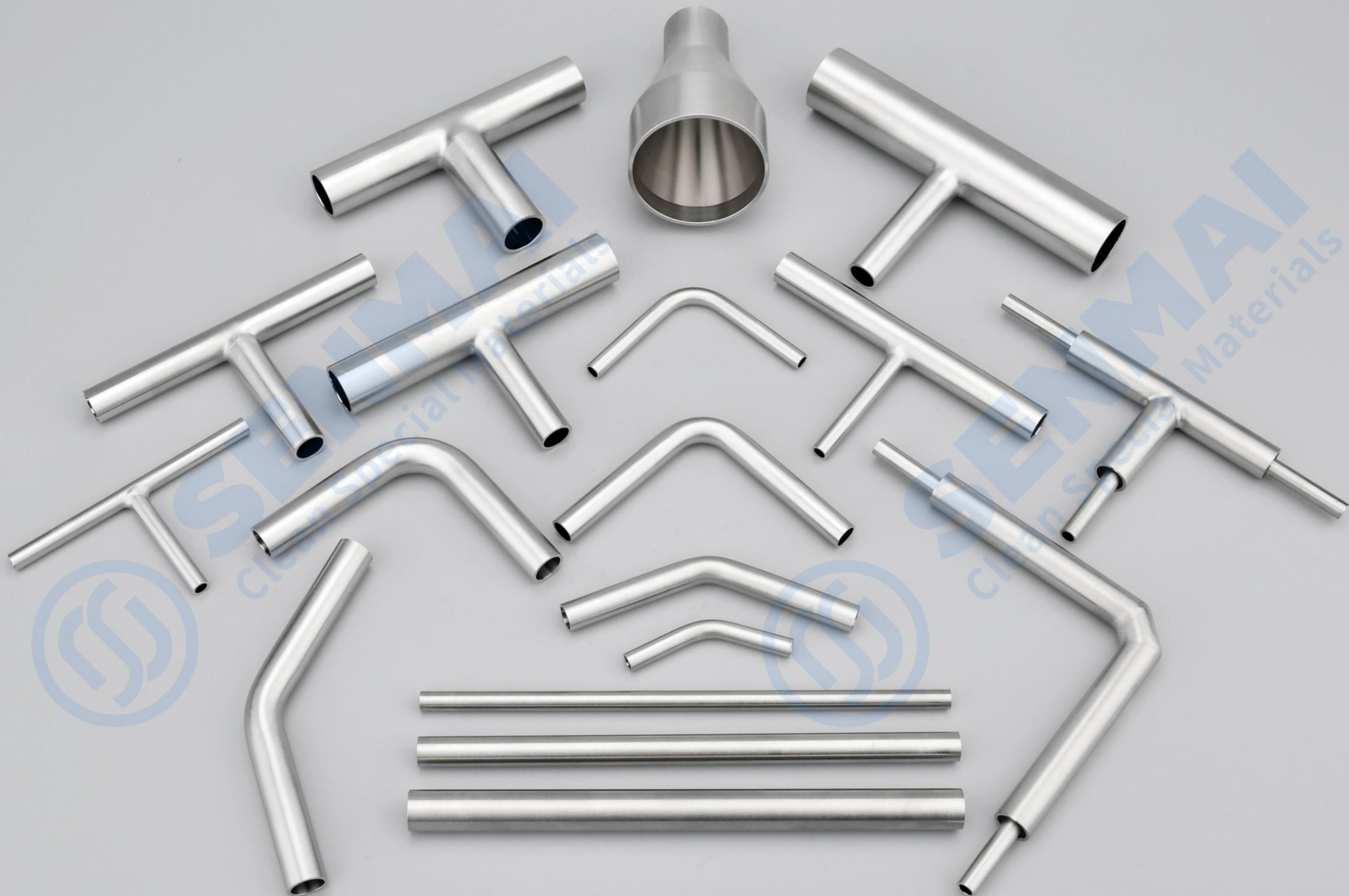


涡流探伤
Eddy current testing



无尘室
Clean room





应用 Applications

半导体 Semiconductor



钢种 Grade
TP306L, EN 1.4404/1.4435,
VIM VAR, BN2

应用领域 Application
光亮退火 + 电解抛光
BA+EP(Electro polishing)



一般特性 General characteristics

- 优越的抗腐蚀能力和耐热性
- Excellent corrosion and heat resistance
- 优越的耐磨性
- Outstanding WEar resistance
- 高温下高延展性
- High creep strength in high temp environment

特气 Special gases



钢种 Grade
TP316L

应用领域 Application
特殊气体的输送, 吹扫、排放气体
Transport of special gases,
blowing and venting of gases



一般特性 General characteristics

- 耐腐蚀性, 密封性好
- Corrosion resistance, good sealing
- 耐高温性, 承受热膨胀和热应力
- High temperature resistance, expansion resistance
- 高强度, 稳定性好
- High strength, good stability

制药工程 Pharmaceutical Engineering



钢种 Grade
TP316L

应用领域 Application
制药工艺, 气体流体管道输送
Pharmaceutical process, gas and
fluid pipeline transportation



一般特性 General characteristics

- 优越的抗腐蚀能力和耐热性
- Excellent corrosion and heat resistance
- 优秀的稳定性
- Excellent stability
- 抗压强度高
- Strong compressive strength

生物医疗 Biomedical



钢种 Grade
TP316L

应用领域 Application
流体输送, 灭菌设备, 生物样本存储
Fluid transportation, sterilization
equipment, biological sample
storage



一般特性 General characteristics

- 耐腐蚀, 易清洁
- Corrosion resistant and easy to clean
- 抗压强度高
- Strong compressive strength
- 稳定性好
- Good stability

汽车 Automotive



钢种 Grade
SUS 304/304L

应用领域 Application
GDI Engine
直接喷射式发动机



一般特性 General characteristics

- 优越的抗腐蚀能力和耐热性
- Excellent corrosion and heat resistance
- 优越的耐磨性
- Outstanding WEar resistance
- 抗压强度
- Excellent high-pressure reliability
- 氢站 Hydrogen station

石油天然气石化厂 Oil & Gas / Petrochemical plant



钢种 Grade
TP306L, EN 1.4404/1.4435, 904L,
Monel 400 Incoloy825, 2.5MO,
6MO

应用领域 Application
仪表管 & 管线
Instrumentation & piping line
热交换器
Heat Exchanger



一般特性 General characteristics

- 优越的抗腐蚀能力和耐热性
- Excellent corrosion and heat resistance
- 优越的耐磨性
- Outstanding WEar resistance
- 优秀的耐海水腐蚀性能
- Good corrosion resistance in sea water

船舶工业 Shipbuilding Industry



钢种 Grade
TP306/316L, 904L, S31803
Incoloy825, Monel400, 2.5MO, 6MO

应用领域 Application
脐管
Umbilical Tube
前绝缘管
PIT(pre Insulated Tube)



一般特性 General characteristics

- 高强度
- High strength
- 优秀的耐海水腐蚀性能
- High corrosion resistance in SEa water
- 优良的焊接性和加工性
- Excellent weldability and machinability



犯其至难，而图其至远。

Fight the hardest, pursue the most ambitious goal.

森脉是国内屈指可数可以成功生产出应用于半导体、生物制药、液晶面板、特种气体等行业的光亮退火管和电解抛光不锈钢无缝管的企业之一。

公司所用的原材母料料按行业标准元素数据提供给国内知名冶炼钢厂委托定炼，保证母材材质的可靠性及稳定性，从前端干预开坯到严格控制精轧精拉到电解抛光。

Senmai is one of the few companies in China that has succeeded in production of Bright Annealed seamless tube and Electrochemical Polishing stainless steel seamless tube for Semiconductor , Biopharmaceutical, LCD panels, Special Gas and other industries.

The raw materials used in the production of Senmai are provided to domestic well-known smelting mills for commissioning and refining according to industry standard element data to ensure the reliability and stability of the base material, from front-end intervention to embryo opening to strict control of finishing rolling and finishing to electrolytic polishing.