

BAOSTEEL **Film-Laminated Steel**

宝钢覆膜铁产品手册

www.baosteel.com



用户导向 合规经营 风险防控 安全健康

目录 CONTENTS

简介 / Introduction

- 01 产品系列 List of Products
- 02 产品结构 Product / Film Structure

01

产品特性 / Features

- 01 覆膜铁产品的优点 Advantages of Laminated Steel
- 02 覆膜铁产品的性能 Product Performance
- 03 宝钢覆膜铁的技术特点 Technology Characteristics

03

产品用途 / Applications

04

制造工艺 / Manufacturing Process

05

供货规格 / Available Specification and Size

05

- 01 尺寸规格 Available Size
- 02 调质度 Temper Grade
- 03 薄膜 Film Thickness and Color
- 04 涂蜡 Lubricating

使用须知 / Instruction and Precaution

06

包装和标识 / Packaging and Marking

07

订货产品标准 / Product Standard or Protocol

08

订货所需信息 / Requested Information of order or Inquiry

08



简介

Introduction

覆膜铁是由高分子树脂薄膜和钢板组成的一种环保包装材,主要通过熔融法将聚对苯二甲酸乙二醇酯(PET)等薄膜覆合于镀铬板(TFS)、镀锡板(ETP)、冷轧板表面。覆膜铁产品具有优良的耐腐蚀、耐加工、易印刷等性能,可有效保障食品安全,可使得包装艳丽夺目。

宝钢股份是中国主要的镀锡产品制造商之一,具有先进的工艺装备、丰富的生产管理经验、良好的服务及一流的研发和制造队伍。宝钢拥有高端覆膜铁产线,不仅集成基板全流程技术、薄膜技术、覆膜工艺及装备技术、产品及使用技术,而且机组采用产品在线质量监测和在线生产精确控制技术,有效实现了覆膜铁产品稳定生产。宝钢覆膜铁产品已经广泛应用于食品、饮料、化工等领域的包装,获得用户好评。

Laminated Steel is green and low-carbon packaging material which is made of the multi-polymer film and the steel base, the steel trip such as TFS(Tin Free Steel) or ECCS(Electrolytic Chrome Coated Steel), electrolytic tinplate and cold rolling steel is combined with resin such as polyethyleneterephthalate (PET) by heating and melting. Laminated Steel can preserve food effectively with excellent merits in corrosion resistance, forming, printability, and so forth.

Baosteel is one of the largest manufacturers of tin-mill products in China with advanced technical equipments, first class inspection devices, skilled operators, excellent services and outstanding product development personnel. Baosteel has a self-developed laminated steel line of a higher level in domestic area, which is on basis of integrated technology including the base steel process, film, laminating process, equipment, product and application. The line is equipped with on line quality monitors and controllers in order to ensure the laminated steel is of stable and good performance. Baosteel's Laminated steel is widely applied to packaging of food, beverage and industrial goods and enjoys high reputation in the global market.



产品系列

List of Products

镀铬覆膜铁 TFS-Based Film-Laminated Steel	一次冷轧镀铬覆膜铁 (SR TFS BF) Single Reduced TFS-Base Film-Laminated Steel
	二次冷轧镀铬覆膜铁 (DR TFS BF) Double Reduced TFS-Base Film-Laminated Steel
镀锡覆膜铁 Tinplate-Based Film-Laminated Steel	一次冷轧镀锡覆膜铁 (SR ETP BF) Single Reduced Electrolytic Tinplate-Base Film-Laminated Steel
	二次冷轧镀锡覆膜铁 (DR ETP BF) Double Reduced Electrolytic Tinplate-Base Film-Laminated Steel

注：宝钢覆膜铁产品包括4类，以BF开头，其中BFG是常规覆膜铁，BFE是高延伸覆膜铁，BFA是高附着性覆膜铁，BFX是特殊高要求的覆膜铁。

Note: Baosteel Film-Laminated Steel is classified into 4 sub groups as follows.

BFG stands for General Film-Laminated Steel

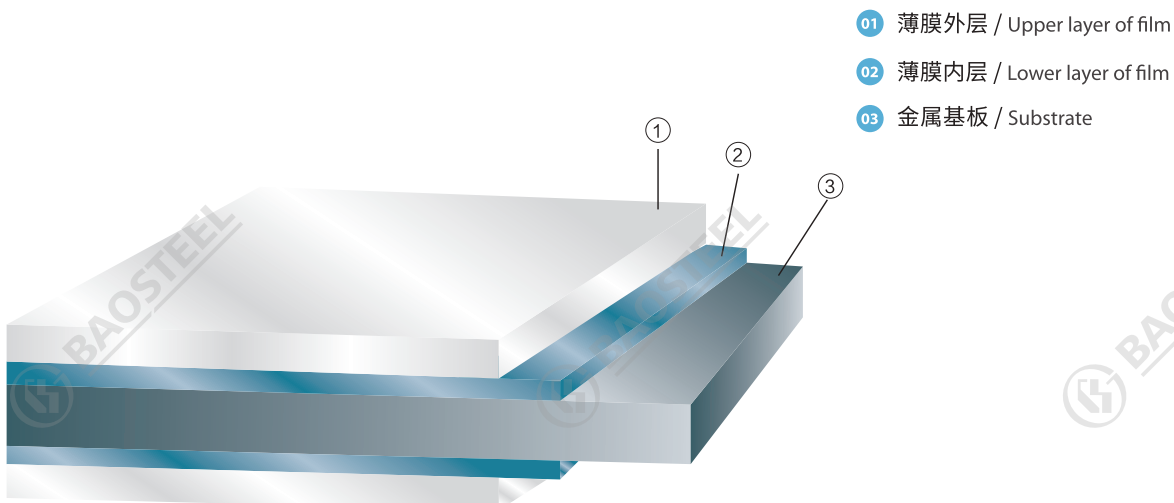
BFE stands for Film-Laminated Steel with High Elongation

BFA stands for Film-Laminated Steel with High Adhesion

BFX stands for Film-Laminated Steel with Special and High Requirement

产品结构

Product / Film Structure



产品特性

Features

01 覆膜铁产品的优点 / Advantages of Laminated Steel

食品安全: 不含对人体有害的各种化学物质, 不使用粘着剂、溶剂, 确保人体健康、安全;

绿色低碳: 生产无溶剂挥发和废气排放, 加工不需要涂料及涂布烘烤, 对环境污染更少, 高效节能。

Food Safety: Keeping food hygienic and safe because of the film constituting no hazardous substance and the process without the adhesive and solvent.

Green and low-carbon: No solvent and exhaust emission without coating and curing process, accordingly there is less pollution and energy consumption and high-efficiency.

02 覆膜铁产品的性能 / Product Performance

高阻隔性能: 薄膜具有优异的阻隔及稳定性能, 能有效阻止腐蚀介质渗透, 保障食品在存储过程中的安全性;

高成形性能: 较高的抗拉强度和极好的延伸率使产品加工性能明显提升, 优良的耐磨性能有效防止加工中破损;

易印刷性能: 优异的着色性使膜的印刷极为便利, 印刷后色彩鲜艳, 外观亮丽。

Excellent Barrier: The immutable and stable film as an excellent barrier layer can separate the corrosive substance from steel base, thereby preserving food better during shelf life.

Excellent Formability: The film with higher strength and elongation and wear-resisting significantly improves on the complicate formability of laminated steel.

Excellent Printability: The film with excellent adhesion to ink makes printing convenient, and enhances color fastness and vividness and brilliant appearance.

03 宝钢覆膜铁的技术特点 / Technology Characteristics

全流程制造: 宝钢具备从冶炼、热轧、冷轧、电镀全流程的制造能力, 覆膜铁基板覆盖镀锌板、镀锡板、冷轧板。

自主集成技术: 宝钢覆膜铁产品集成了先进的基板技术、薄膜技术、覆膜工艺及装备技术、产品技术、使用技术等, 产品性能优异。

在线品质监控: 宝钢覆膜铁机组配置许多在线检测仪表如在线X衍射仪、在线膜孔仪等实时在线监测产品质量, 在线温度监测及反馈控制技术确保了产品质量的精确控制, 有效保证了宝钢覆膜铁产品的优异性能及质量稳定。

Complete manufacturing Process, steelmaking, hot rolling, cold rolling and TFS or ETP lines, the base steel for laminating covers TFS, ETP and CR plate.

Autonomous integration technology, film fabrication, laminating process, equipment technology, and application research, contributing to the excellent properties of products.

Online Quality Control, online pinhole detector monitoring film quality, and with online laminating temperature controller exerting precise adjustment, so that the excellent properties and quality steadiness of products is guaranteed.



覆膜铁机组 / Film-Laminated Line

产品用途

Applications

主要用于中高端的食品、饮料包装, 包括顶底盖、易开盖、浅冲DRD罐、深冲DRD罐及其他异型罐/盖。也可用于包装油脂、颜料、喷雾剂等化学品的容器。

Baosteel's laminated steel can be used as packaging material not only for food and beverage but also for chemicals such as oil, paint, spray agent. It can be shaped into top end, EOE(Easy-Open-End), ordinary drawing can, deep drawing can, and other shaped can/end.

顶底盖



Top or Bottom End



易开盖



Easy Open End



浅冲DRD罐



Ordinary Drawing Can



深冲DRD罐

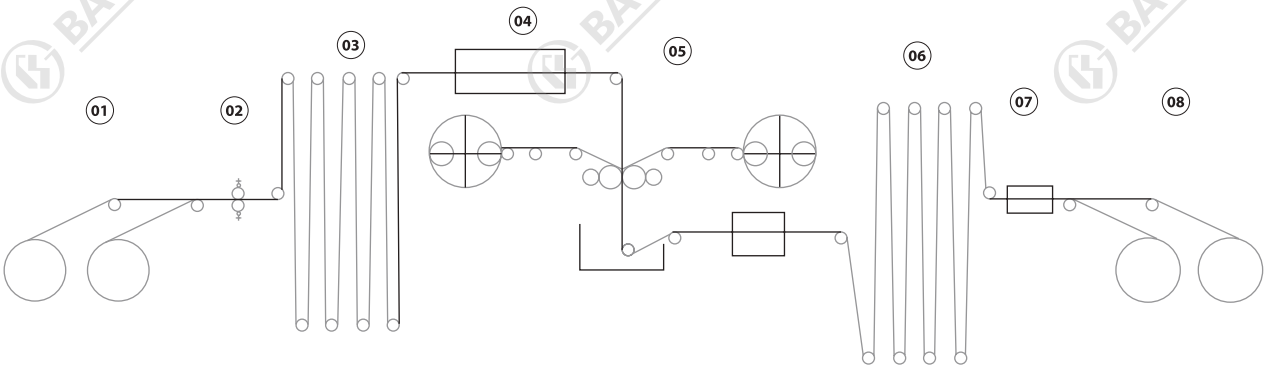


Deep Drawing Can



制造工艺

Manufacturing Process



- 01 开卷机 / Uncoiler 03 入口活套 / Entry Looper 05 覆膜段 / Laminating Section 07 涂蜡 / Lubricating
02 焊机 / Welder 04 加热单元 / Heating Unit 06 出口活套 / Exit Looper 08 卷取机 / Coiler

供货规格

Available Specification and Size

01 尺寸规格 / Available Size

- 镀铬覆膜铁 TFS-Based Film-Laminated Steel

基板类型 Steel Base	公称厚度 Nominal Gauge	公称宽度 Nominal Width	公称长度 (钢板) Nominal Length(for Sheets)
一次冷轧SR	0.17~0.38mm	700~1050mm	500~1168mm
二次冷轧DR	0.14~0.36mm		

- 镀锡覆膜铁 Tinplate-Base Film-Laminated Steel

基板类型 Steel Base	公称厚度 Nominal Gauge	公称宽度 Nominal Width	公称长度 (钢板) Nominal Length(for Sheets)
一次冷轧SR	0.17~0.40mm	700~1050mm	500~1168mm
二次冷轧DR	0.14~0.36mm		

02 调质度 / Temper Grade

基板类型 Steel Base	连续退火 Continuous Annealing
一次冷轧SR	T-1, T-1.5, T-2, T-2.5, T-3, T-3.5, T-4, T-5
二次冷轧DR	DR-7, DR-7M, DR-8, DR-8M, DR-9, DR-9M, DR-10

03 薄膜 / Film Thickness and Color

薄膜颜色 Film Color	单面膜厚 Nominal Thickness of Single Side
透明 Clear	12~30μm
白色 White	
金色 Golden	

04 涂蜡 / Lubricating

若无特殊要求, 表面涂食品级蜡

There is food grade wax on surface of product unless otherwise agreed.

使用须知

Instruction and Precaution

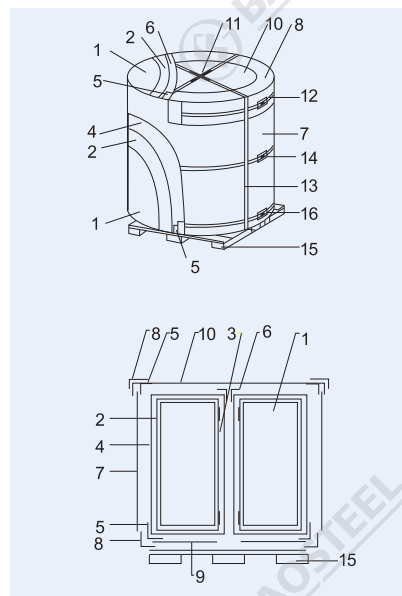
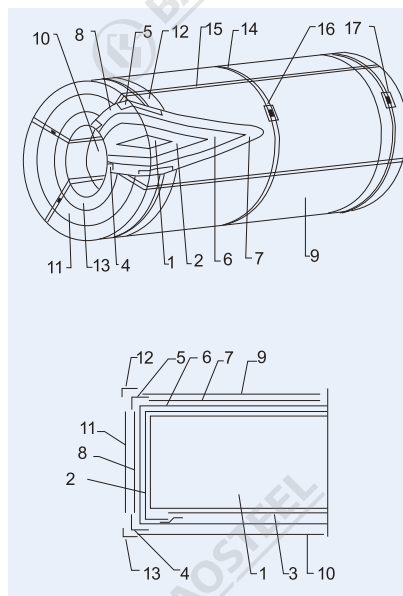
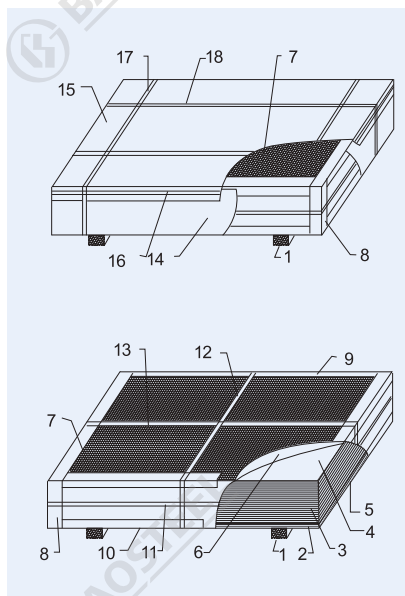
- 01 由于覆膜铁的膜层较软, 应采取适当保护措施, 以避免运输过程中的擦划伤。
- 02 由于覆膜铁性能具有时效性, 请在收货后尽快使用。
- 03 由于潮湿环境不利于覆膜铁的保存, 请在开包后尽快使用。

- 01 Due to softness of film, please take action to prevent it from scratch during delivery.
- 02 Due to the performance variation, please put it into production as soon as receiving the goods.
- 03 Due to the moisture damaging to the laminated steel, please use up the unpacked material as soon as possible.



包装和标识

Packaging and Marking



- 01 木台 / wood bracket
- 02 下盖板 / bottom cover
- 03 钢板 / steel sheet
- 04 上盖板 / top cover
- 05 底部瓦楞纸 / bottom corrugated paper
- 06 防锈纸 / rust-proof paper
- 07 上部瓦楞纸 / top corrugated paper
- 08 边部护角 / side corner guard
- 09 上部护角 / top corner guard
- 10 下部护角 / bottom corner guard
- 11 周向捆带(内) / circumferential banding strip(inner)
- 12 横向捆带(内) / horizontal banding strip (inner)
- 13 纵向捆带(内) / vertical banding strip (inner)
- 14 围板 / guard plate
- 15 盒盖 / steel package box
- 16 周向捆带(外) / circumferential banding strip (outer)
- 17 横向捆带(外) / horizontal banding strip (outer)
- 18 纵向捆带(外) / vertical banding strip (outer)

- 01 钢卷 / steel coil
- 02 外周防锈纸 / external peripheral rest-proof paper
- 03 内芯防锈纸 / inner core rest-proof paper
- 04 纸内护角 / paper inner corner guard
- 05 纸外护角 / paper external corner guard
- 06 塑料套 / plastic sleeve
- 07 外周瓦楞纸或纤维板 / external peripheral corrugated paper or fibreboard
- 08 圆护瓦楞纸 / round corrugated paper guard
- 09 外周包板 / external peripheral wrapping plate
- 10 内周护板 / inner peripheral guard plate
- 11 铁圆护板 / iron round cover
- 12 铁外护角 / iron external corner guard
- 13 铁内护角 / iron inner corner guard
- 14 周向捆带 / circumferential banding strip
- 15 径向捆带 / radial banding strip
- 16 锁扣垫片 / shim for lock
- 17 锁扣 / lock

- 01 钢卷 / steel coil
- 02 外周防锈纸 / external peripheral rest-proof paper
- 03 内芯防锈纸 / inner core rest-proof paper
- 04 纸内护角 / paper inner corner guard
- 05 纸外护角 / paper external corner guard
- 06 铁圆护板 / iron round cover
- 07 铁内护角 / iron inner corner guard
- 08 铁外护角 / iron external corner guard
- 09 外周包板 / external peripheral wrapping plate
- 10 内周护板 / inner peripheral guard plate
- 11 周向捆带 / circumferential banding strip
- 12 径向捆带 / radial banding strip
- 13 锁扣垫片 / shim for lock
- 14 锁扣 / lock

- 可提供钢卷和钢板产品，钢卷提供立式和卧式包装形式。
- 附有产品外标签和内标签。
- 您需要的包装形式和标签要求，请联系我们确认。

- Feasible in coils and sheets , coil packed eye to the sky or eye to the wall.
- A label that indicates the manufacturing history is affixed to the outside of the packaging. In addition, a service card is contained inside.
- With regard to types of packing and markings, please consult us.

订货产品标准

Product Standard or Protocol

订货按照 BQB 456-2023 覆膜铁钢板及钢带

Orders are in accordance with BQB 456-2023 (Film laminated steel sheet and strip)

订货所需信息

Requested Information of order or Inquiry

- 产品名称
- 本产品标准号
- 调质度
- 钢板尺寸及其精度 (包括厚度、宽度、长度、钢带内径等)
- 膜层厚度与颜色
- 涂蜡量
- 订货重量
- 包装方式
- 罐型/盖型
- 内容物
- 杀菌方式及条件
- 抗性要求
- 其他

- Product name
- Product standard or Technical Protocol
- Temper grade
- Specification and tolerance of steel base(Including thickness, width, inside diameter of coil, length of sheets, etc)
- Thickness and color of film
- Lubricant weight
- Weight
- Packaging
- End Use
- Type of content
- Conditions of sterilization
- Resistance requirement
- Others



宝山钢铁股份有限公司<http://www.baosteel.com>**BAOSHAN IRON & STEEL CO., LTD.**<http://www.baosteel.com>**冷板销售部****CRS Sales Department**

地址: 上海宝山漠河路151号

邮编: 201999

电话: 021-26641559

宝钢服务热线**Baosteel Service Hot-line**

400-820-8590

宝钢慧创平台**iBaosteel**<http://www.ibaosteel.com>**国内贸易公司 Domestic Sales Channels****上海宝钢钢材贸易有限公司****SHANGHAI BAOSTEEL
STEEL PRODUCTS TRADING CO., LTD.**

TEL: 021-26640916

广州宝钢南方贸易有限公司**GUANGZHOU BAOSTEEL
SOUTHERN TRADING CO., LTD.**

TEL: 020-32219999

北京宝钢北方贸易有限公司**BEIJING BAOSTEEL
NORTHERN TRADING CO., LTD.**

TEL: 010-56512000

成都宝钢西部贸易有限公司**CHENGDU BAOSTEEL
WESTERN TRADING CO., LTD.**

TEL: 028-85335388

武汉宝钢华中贸易有限公司**WUHAN BAOSTEEL
CENTRAL CHINA TRADING CO., LTD.**

TEL: 027-84298800

沈阳宝钢东北贸易有限公司**SHENYANG BAOSTEEL
NORTH-EASTERN TRADING CO., LTD.**

TEL: 024-31391180

东北亚及澳洲大区 Northeast Asia and Oceania Region**宝和通商株式会社****HOWA TRADING CO., LTD.**

TEL: 0081-3-32379121

FAX: 0081-3-32379123

首尔事务所**SEOUL OFFICE**

TEL: 0082-2-5080893

FAX: 0082-2-5080891

BGM株式会社**BGM CO., LTD**

TEL: 0082-70-44225903

FAX: 0082-31-3514558

高雄事务所**KAOHSIUNG OFFICE**

TEL: 00886-7-3356606

FAX: 00886-7-3356609

宝钢澳大利亚贸易有限公司**BAO AUSTRALIA PTY LTD.**

TEL: 0061-8-94810535

FAX: 0061-8-94810536

东南亚及南亚大区 South East Asia and South Asia Region**宝钢新加坡贸易有限公司****BAOSTEEL SINGAPORE PTE LTD.**

TEL: 0065-63336818

FAX: 0065-63336819

宝新越南代表处**VIETNAM OFFICE**

TEL: 0084-8-9100126

FAX: 0084-8-9100124

宝新泰国代表处**THAILAND OFFICE**

TEL: 0066-2-6368485

FAX: 0066-2-2348989

宝新河内代表处**HANOI OFFICE**

TEL: 0084-24-62694200

FAX: 0084-24-62691392

宝钢印尼钢材加工有限公司(含印尼代表处)**PT. BAOSTEEL INDONESIA STEEL SERVICE CENTER
(INDONESIA OFFICE)**

TEL: 0062-21-3040 8575

FAX: 0062-21-3040 8583

宝钢印度有限公司(含SANAND加工中心)**BAOSTEEL INDIA COMPANY PRIVATE LTD.
(SANAND STEEL SERVICE CENTER)**

TEL: 0091-22-30071700

FAX: 0091-22-30071777

宝新马来西亚代表处**MALAYSIA OFFICE**

TEL: 0060-32-2016986

欧非中东大区 Europe, Africa & Middle East Region**宝钢欧洲有限公司****BAOSTEEL EUROPE GMBH**

TEL: 0049-89-32709090

FAX: 0049-89-3270909130

宝钢西班牙有限公司**BAOSTEEL ESPAÑA, S.L.**

TEL: 0034-93-4119325

FAX: 0034-93-4119330

宝钢中东公司**BAOSTEEL MIDDLE EAST FZE**

TEL: 00971-4-8840458

FAX: 00971-4-8840485

宝欧南非代表处**SOUTH AFRICA OFFICE**

TEL: 0027-11-7839985

FAX: 0027-11-7842408

宝欧土耳其代表处**TURKEY OFFICE**

TEL: 0090-212-3440067

FAX: 0090-212-3440068

宝欧俄罗斯代表处**RUSSIA OFFICE**

TEL: 7-499-2585602

FAX: 7-499-2585602

宝钢意大利钢材集散中心有限公司**BAOSTEEL ITALIA DISTRIBUTION CENTER SPA**

TEL: 0039-010-530881

FAX: 0039-010-5308895

美洲大区 America Region**宝钢美洲有限公司****BAOSTEEL AMERICA INC.**

TEL: 001-201-3073355

FAX: 001-201-3073358

宝钢巴西有限公司**BAOSTEEL DO BRAZIL LTDA.**

TEL: 0055-11-26678869

宝美加拿大代表处**CANADA OFFICE**

TEL: 001-905-7315888/7315885

FAX: 001-905-7315883

宝美圣地亚哥代表处**SAN DIEGO OFFICE**

TEL: 001-949-7526789

FAX: 001-949-7521234

宝美墨西哥代表处**MEXICO OFFICE**

TEL: 0052-55-55319506

FAX: 0052-55-55319506-201

宝美巴拿马代表处**PANAMA OFFICE**

TEL: 507-382-5225

