



STANDARD

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Surface Treatment – Directives and Instructions

表面处理-指令和说明

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(资料性) 斯堪尼亚表面处理标准树

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上一期的更改

Changes from previous issue

- The entire standard has been reworked. 整个标准已经重新制定
- The exposure level for parts in the engine compartment have been changed from 1 to 2. 发动机舱中零件的暴露水平已从1更改为2
- Engine parts shall now be equipped with the note "Engine part" in the technical specification to refer to new corrosion requirements in STD4113 and STD4165. 发动机零件现在应配备技术规范中的注释“发动机零件”
- A checklist of the designer responsibility has been added as chapter 7. 别地参考STD4113和STD4165中的新腐蚀要求。第7章增加了设计师责任清单。
- The concept "MCC A-order painting" has been introduced to the standard. 标准中引入了“MCC A级涂装”的概念。
- Referral to STD4572 for definition and classification of surface finish, and for applicable finish requirement standards, added throughout the standard. 关于表面光洁度的定义和分类，以及适用的光洁度要求标准，请参考STD4572，并在整个标准中添加。
- STD4571 added as a requirement standard for painted interior plastic parts. STD4571添加为涂漆内部塑料零件的要求标准。
- Instructions on how to specify regarding hanging marks have been added and the connected requirements have been adjusted. 增加了关于如何指定悬挂标记的说明，并调整了相关要求。
- Instructions for how to state on drawings have been added, updated or moved to chapter 4. 关于如何在图纸上说明的说明已添加、更新或移至第4章。
- The term "Surface treatment method" has been replaced with "Surface treatment concept" and a definition has been added to chapter 2 Terms and definitions. 术语“表面处理方法”已替换为“表面处理概念”，并在第2章术语和定义中添加了一个定义。
- The method for stating phosphate conversion coatings has been moved to STD4291. 磷酸盐转化涂层的说明方法已移至STD4291。
- Requirements concerning the use of hot dip galvanising has been added to the standard. 有关使用热浸镀锌的要求已添加到标准中。
- The colours of different parts have been removed from the Surface Treatment Directive, which also has been adjusted. 不同零件的颜色已从《表面处理指令》中删除，该指令也进行了调整。
- The examples have been moved to Annex A and have been made informative. 这些例子已移至附件A，并提供了资料。
- The term "contact surface" has been replaced by "mating surface". 术语“接触面”已由“配合面”预加。
- A visualisation of the connection between Scania standards concerning surface treatment have been added as an annex. 斯堪尼亚表面处理标准之间的联系已作为附件添加。
- The terms "Corrosion protection agent", "DSM", "Exposure level" and "Finish classification" have been added to chapter 2 Terms and definitions. 术语“腐蚀防护剂”、“DSM”、“暴露水平”和“光洁度分类”已添加到第2章术语和定义中。
- Chapter 6 has been revised clarify better which standards are applicable to different surface treatments. 第6章已经修订，更好地阐明了哪些标准适用于不同的表面处理。
- Referral to STD4246 for visible parts added. 添加的可见零件参考STD4246。
- STD4113 added as requirement standard for anodised aluminium surfaces that are to be painted. 添加STD4113作为待涂漆的阳极氧化铝表面的要求标准。
- Removal of referral to STD4103 for requirements on primer painted parts. 删除了关于底漆涂漆零件要求的STD4103参考+Al和
- Environmental and dimension requirements have been moved to chapter 5 General requirements. 环境和尺寸要求已移至第5章“一般要求”。
- Removal of statement containing contradiction regarding drawings being overridden by STD4310. 删除包含与STD4310覆盖的图纸有关的矛盾的声明。
- New drawing examples have been added. 添加了新的图形示例。



Introduction

介绍

The purpose of this standard is to set rules for how to work with Scania's surface coated or coloured parts and how to fulfil the requirements of Scania's customers. 本标准旨在为如何使用斯堪尼亚表面涂层或彩色零件以及如何满足斯堪尼亚客户的要求制定规则。

This document is intended for Scania designers, purchasers and production units, as well as for suppliers and others who require an overall view of Scania's requirements regarding surface coated and coloured parts. 本文件适用于斯堪尼亚的设计师、采购商和生产单位，以及供应商和其他需要全面了解斯堪尼亚对表面涂层和彩色零件要求的人员。

This standard is also intended to give a comprehensive view of Scania standards (STD) related to the surface properties. An overview of the Scania standards governing surface treatment and finish can be found in Annex B. 本标准还旨在全面了解与表面性能相关的斯堪尼亚标准 (STD)。斯堪尼亚表面处理和光洁度标准概述见附录 B。

1 Scope 范围

This standard is applicable for all parts and components that are, or shall be, provided a surface coating for protection or decoration. It is also applicable for all coloured plastic parts.

本标准适用于所有已提供或应提供保护或装饰表面涂层的零部件。它也适用于所有颜色的塑料零件。

The standard, along with STD4514 and STD4572, defines how to designate a surface coating or colouring of a part in the technical documentation. 该标准与STD4514和STD4572一起定义了如何在技术文件中指定零件的表面涂层或颜色。

STD4111 chapter 5 and chapter 6 state the requirement documents applicable for the parts stated in this scope. STD4111第5章和第6章规定了适用于本范围所述零件的要求文件。

A visual overview of the internal documentation at Scania, related specifically to surface properties, can be found in Annex B. 斯堪尼亚内部文件的视觉概述，特别是与表面特性相关的文件，可在附件B中找到。

2 Terms and definitions 术语和定义

Appearance item 外观项目	A part that will be subjected to the Scania appearance approval process (AAR) according to STD4246. 根据STD4246, 将接受斯堪尼亚外观审批程序 (AAR) 的零件。
Appearance master 外观大师	A physical reference that in most cases is the only reference for the colour, gloss and/or texture of a part, as described further in STD4102. The following types of Scania appearance masters exist: 一种物理参考, 在大多数情况下是零件颜色、光泽和/或纹理的唯一参考, 如STD4102中进一步描述的。存在以下类型的斯堪尼亚外观大师:
CS	Colour Standard Appearance master for colour (painted) 颜色标准 颜色的外观母版 (油漆)
TCS	Texture and Colour Standard Appearance master for texture, colour and gloss (mostly used for plastic parts) 纹理和颜色标准 纹理、颜色和光泽的外观标准 (主要用于塑料零件)
Coloured 彩色	Used for plastic and rubber parts that has a colour through the use of pigments or dyes mixed in the plastic material. The concept "coloured" is used for parts that have not been painted. 用于通过使用塑料材料中混合的颜料或染料而具有颜色的塑料和橡胶零件。“彩色”概念用于未喷漆的零件。
Corrosion protection agents 腐蚀防护剂	Substances that protect metal surfaces from corrosion, but are not considered paints. Can offer either temporary or permanent corrosion protection. 保护金属表面不受腐蚀的物质, 但不被视为油漆。可提供临时或永久腐蚀保护。
Temporary 短暂的	Easily removed with hot or cold high-pressure water 使用高温或低温高压水轻松移除
Permanent 永久的	Difficult to remove without solvents and/or machining 在没有溶剂和/或机加工的情况下难以去除



DSM	Digital Shape Model <small>数字形状模式</small> A 3D model representing the industrial design, created by a surface designer. <small>由表面设计师创建的代表工业设计的3D模型。</small>
Electro coating <small>电镀</small>	Electro dip coating process (E-coating or ED-coating) or Katodische Tauchlackierung (KTL). <small>电浸镀工艺 (E涂层或ED涂层) 或Katodische Tauch-Lackierung (KTL)。</small>
Exposure level <small>暴露水平</small>	Definition of the expected level of exposure to corrosion, weathering and mechanical wear, depending on the position on the vehicle. <small>根据车辆上的位置, 确定预期暴露于腐蚀、风化和机械磨损的程度。</small> Used for defining durability requirements on part or component level according to specific standards. Used for individual parts, or for different areas of individual parts, and shall be defined in the technical documentation. See chapter 4 for further details. <small>用于根据特定标准定义零件或组件级别的耐久性要求。用于单个零件或单个零件的不同区域, 并应在技术文件中进行定义。详见第4章。</small>
Exterior part <small>外部</small>	Part that will be mounted on the outside of the cab or the bus or on the chassis. <small>将安装在驾驶室或总线外部或底盘上的零件。</small>
Finish classification <small>饰面分类</small>	Definition of required surface quality, depending on its visibility and position on the vehicle. <small>所需表面质量的定义, 取决于其在车辆上的可见性和位置。</small> Used for defining finish demands on part or component level according to specific standards. Used for individual parts, or for different areas of individual parts, and shall be defined in the technical documentation. See chapter 4 for further details. <small>用于根据特定标准定义零件或零部件级别的光洁度要求。用于单个零件或单个零件的不同区域, 并应在技术文件中进行定义。详见第4章。</small>
Finish painted <small>涂漆饰面</small>	The material has been painted and no additional surface processing will be done. <small>材料已喷漆, 不会进行额外的表面处理。</small>
Interior part <small>内部零件</small>	Part that is mounted inside the cab or the bus. <small>安装在驾驶室或公共汽车内部的零件。</small>
Mating surface <small>配合面</small>	A surface area of a part, which after assembly will be in contact with another surface in a screw joint. <small>零件的一个表面区域, 装配后将与螺纹接头中的另一个表面接触。</small> Older drawings may contain the term "contact surface". <small>较旧的图纸可能包含术语“接触面”。</small>
Marks from hanging <small>挂起的标记</small>	The marks arise from contact points between the part and the mounting equipment required to hold the parts during the surface treatment process. <small>在表面处理过程中, 零件和固定零件所需的安装设备之间的接触点会产生标记。</small>
MCC	Multi Colour Concept – Painting of exterior parts in customer ordered colours. <small>多色概念-以客户订购的颜色对外部零件进行喷漆。</small> The concept includes painting of otherwise unpainted parts, and applying alternate colours to parts that are generally painted. <small>这一概念包括对未喷漆的零件进行喷漆, 以及对通常喷漆的零件应用替代颜色。</small>
MCC A-order <small>MCC A订单</small>	A specific category of MCC, where the expectations on the appearance of the MCC painted part is higher. <small>MCC的一个特定类别, 其中对MCC涂漆部分外观的期望更高。</small> Refers specifically to <ul style="list-style-type: none"> • painting of underline parts, side skirts and rear line parts, that are generally unpainted, and <small>通常未喷漆的下划线零件、侧裙板和后裙板零件的喷漆, 以及</small> • painting of parts on the cab in a customer ordered colour. <small>按照客户要求的颜色在驾驶室上喷涂零件。</small>



Paint
油漆

A powder or liquid based polymeric substance containing pigments, which after curing result in a smooth or textured solid layer. The term includes primers, topcoats, single coats and combinations of base coat and clear coat. 一种含有颜料的粉末或液体基聚合物，固化后形成光滑或有纹理的固体层。该术语包括底漆、面漆、单涂层以及底涂层和透明涂层的组合。

PD

Technical Product Data
Scania technical document for supplementary information, which is a part of Scania's technical product documentation. 技术产品数据 斯堪尼亚技术文件的补充信息 斯堪尼亚的技术产品文件的一部分。 参见STD4081。
See STD4081.

Primer
底漆

A powder or a liquid paint intended to improve adhesion to the substrate and/or finish of the finish painted product. A primer can also improve corrosion protection, stone chip resistance and/or help to achieve correct colour of a finish painted product. 一种粉末或液体涂料，旨在提高对基材的附着力和/或面漆产品的面漆。底漆还可以提高防腐性、耐石屑性和/或有助于实现面漆产品的正确颜色。

Powder paint
粉末涂料

A powder-based polymeric substance which, after application and curing, forms a solid paint layer. 一种粉末基聚合物，在涂敷和固化后形成固体涂料层。

Rear line
后部线路

Exterior chassis parts positioned from the rear axle to the rear end of the truck, such as mud guards. 从后轴到卡车后端的外部底盘部件，如挡泥板。

Scania Lexicon
斯堪尼亚词典

Scania Lexicon is Scania's corporate term database. 斯堪尼亚词典是斯堪尼亚的公司术语数据库。

STD4514-parts
STD4514零件

Refers to small parts and fastening systems categorised by STD4514. 指按STD4514分类的小型零件和紧固系统。

Surface coating
表面涂层

A layer or film spread over a surface for protection or decoration. Reference Scania Lexicon. 覆盖在表面上的一层或一层薄膜，用于保护或装饰。参考Scania Lexicon。

Surface treatment concept
表面处理概念

Defines the method of providing the finalised surface properties of the part or component. The concepts used by Scania are stated in section 4.2. 定义提供零件或零部件最终表面特性的方法。斯堪尼亚公司使用的概念见第4.2节。

TB

Technical Regulation (Teknisk Bestämmelse)
Scania supplementary requirement document, which is a part of Scania's technical product documentation. 技术法规 (Teknisk Bestämmele) 斯堪尼亚补充要求文件，是斯堪尼亚技术产品文件的一部分。参见STD804。
See STD804.

Technical documentation
技术文件

Documents describing the combined technical requirements on a Scania part or component, such as drawings, CAD models, PD:s, TB:s and standards. 描述斯堪尼亚零件或组件组合技术要求的文件，如图纸、CAD模型、PD:s、TB:s和标准。

Note: Any information requested on the drawing by this standard can be transferred to any other technical documentation, if appropriate.
注：如果适用，本标准要求的图纸上的任何信息都可以转移到任何其他技术文件中。

Top coat
面漆

The outer layer of paint, which is applied with the aim to provide the final surface properties of the part, e.g. finish, colour, gloss and chemical resistance. 涂层的外层，其目的是提供零件的最终表面特性，例如光洁度、颜色、光泽和耐化学性。

Underline
强调

Front exterior parts below the cab, i.e. chassis parts positioned from the front axle to the front of the truck, such as bumper covers. 驾驶室下方的前部外部零件，即从前桥到卡车前部的底盘零件，如保险杠盖。

Wet paint
湿漆

A liquid based polymeric substance which, after application and curing, forms a solid paint layer. Includes water and solvent borne paint, and electro coating. 一种液态聚合物，在涂敷和固化后形成固体涂料层。包括水性和溶剂性涂料以及电泳涂料。



3 Scania Surface Treatment Directive

斯堪尼亚表面处理指令

The Scania Surface treatment directive:

斯堪尼亚表面处理指令:

- Scania trucks, buses, and power solutions shall have a surface that provides an attractive appearance and corrosion protection with satisfactory durability. 斯堪尼亚卡车、公交车和电力解决方案的表面应具有美观的外观和令人满意的耐用性防腐性能。
- The surface shall have such a quality that the products provide a good overall impression for up to six months of storage outdoors before delivery to the final customer. 表面的质量应确保产品在交付给最终客户之前，在户外储存长达六个月，给人留下良好的整体印象。
- No visible corrosion or any other visible change of surfaces shall occur before delivery to the final customer. 在交付给最终客户之前，不得出现任何可见的腐蚀或任何其他可见的表面变化。
- Only minor changes in appearance and corrosion protection on the chassis, engine and powertrain are acceptable during the first year of operation. 在运行的第一年，只有底盘、发动机和动力总成外观和防腐方面的微小变化是可以接受的。
- Degradation causing the need for repair of a surface treated part is not permitted within the first 3–5 years after delivery. 在交付后的前3-5年内，不允许因退化而需要修理表面处理过的零件。
- No corrosion is permitted on the most visible surfaces of the cab or bus body within the first 3–5 years after delivery. 在交付后的前3-5年内，驾驶室或客车车身最显眼的表面不允许出现腐蚀。
- Only limited changes to the surface appearance is permitted within the first 3–5 years after delivery. 在交付后的头3-5年内，只允许对表面外观进行有限的更改。

To fulfil the directive above, the requirements for surface treatment of components are dependent on the component position on the vehicle. The cab and the bus body have the highest requirements of appearance and colour. 为了满足上述指令，部件表面处理的要求取决于部件在车辆上的位置。驾驶室和车身对外观和颜色的要求最高。

The required levels (A-D) for Finish classifications for different parts and components are defined in STD4572. STD4572中定义了不同零件和组件的饰面分类所需的等级 (A-D)。

The required durability, or Exposure levels (1-3), for different parts and components are defined in Table 1. 表1中定义了不同零件和组件所需的耐久性或暴露水平 (1-3)。

The Finish classification and Exposure level of small parts and fastening systems are defined in STD4514. STD4514中规定了小零件和紧固系统的光洁度分类和暴露水平。

To a large extent, part and component painting is practised. This means that each individual part or component shall generally be surface treated individually. 在很大程度上，零件和组件涂装是实践的。这意味着每个单独的零件或部件通常应单独进行表面处理。

3.1 Perceived quality 感知质量

The Scania vehicle is a premium product, and shall convey this message in all quality dimensions. The quality of strength, durability and robustness is very important. Also, the appearance and visual impression is highly contributory to the Scania customers' perception of the vehicle.

斯堪尼亚汽车是一款优质产品，应在所有质量方面传达这一信息。强度、耐用性和坚固性的质量非常重要。此外，外观和视觉印象在很大程度上有助于斯堪尼亚客户对车辆的感知。

Another important aspect is the quality experienced by the customer. This is not easily measurable, but a subjective sum of many different factors. Important contributors are surface quality, a coherent appearance and part fitment. Perceived quality is handled at many places within Scania, but is tightly linked with the vehicle property Technical design quality. 另一个重要方面是客户体验到的质量。这并不容易衡量，而是许多不同因素的主观总和。重要的因素是表面质量、连贯的外观和零件装配。感知质量在斯堪尼亚的许多地方都有处理，但与车辆性能技术设计质量密切相关。

Based on the level of importance for the perceived quality, for a certain part or area, the surface finish classification/zone division is used and defined. This extends to the level of requirements that shall be fulfilled.

基于感知质量的重要性水平，对于某个零件或区域，使用并定义表面光洁度分类/区域划分。这延伸到了应满足的要求水平。



4 Surface treatment code for technical documentation

技术文件的表面处理规范

This chapter describes how to define the properties of a surface coating, or the appearance of a surface, in the technical documentation. The general and specific requirements are stated in chapter 5 and chapter 6, respectively. 本章介绍如何在技术文档中定义表面涂层的特性或表面外观。一般要求和具体要求分别在第5章和第6章中说明。

For parts categorised by STD4514 (small parts and fastening systems), see section 4.5.1. 对于STD4514分类的零件（小型零件和紧固系统），请参见第4.5.1节。

The surface treatment code for surface coated or coloured parts consists of four segments, according to Figure 1. The segments of the surface treatment code are described in section 4.1 to 4.3. 表面涂层或着色零件的表面处理代码由四个部分组成，如图1所示。表面处理代码的各个部分如第4.1节至第4.3节所述。

STD4291中描述了磷酸盐基转化涂层的命名方法，用于临时耐腐蚀和摩擦控制涂层。下文所述的表面处理规范不得用于指定磷酸盐转化涂层。

The designation method for phosphate based conversion coatings is described in STD4291 for coatings for temporary corrosion resistance and for friction control. The surface treatment code described below shall not be used to specify phosphate conversion coatings.

If different requirements shall be applied to different areas of the part, the surface treatment code shall be specified for each such area. 如果零件的不同区域应适用不同的要求，则应为每个区域指定表面处理代码。

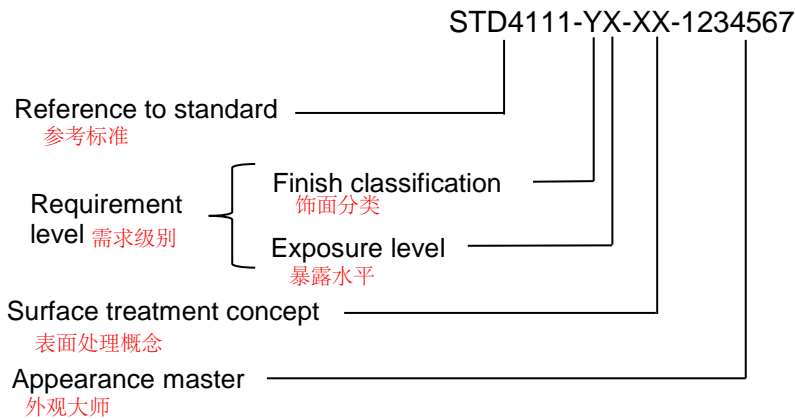


Figure 1 – Breakdown of the surface treatment code. See section 4.1 to 4.3 for details.

图1-表面处理代码的分解。详见第4.1至4.3节。

Figure 2 illustrates the segment of the normal title block where the surface properties shall be stated according to STD1029. 图2显示了应根据STD1029说明表面特性的普通标题栏的部分。

The box “Surface treatment” shall have a surface treatment code or, if there is not enough space, contain the phrase “See note”. “表面处理”框应具有表面处理代码，或者，如果没有足够的空间，则包含短语“见注释”。

The note is placed somewhere on the drawing, as illustrated in Figure 2.

注释放置在图纸上的某个位置，如图2所示。

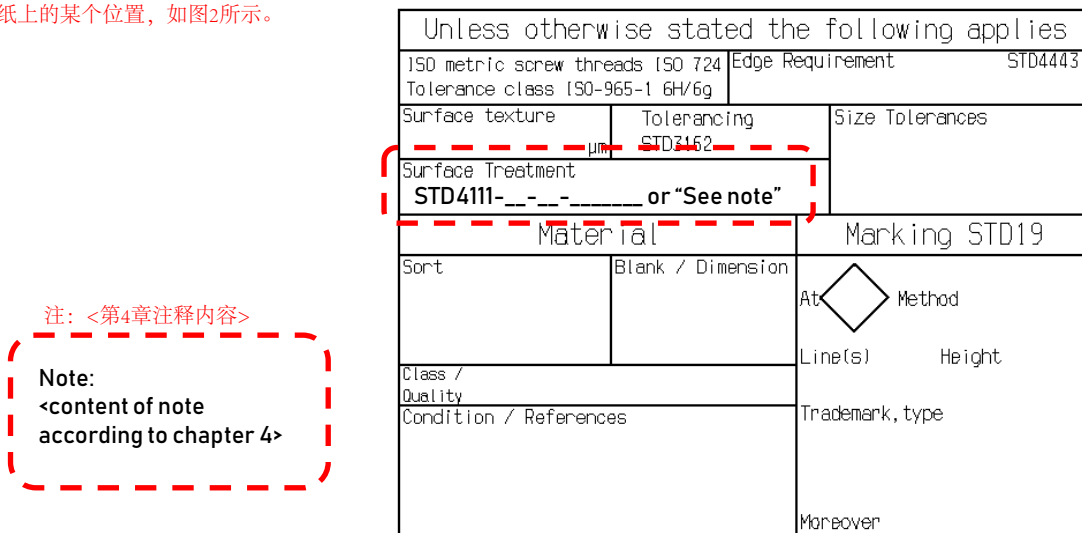


Figure 2 – Title block in a Scania drawing

图2-斯堪尼亚图纸中的标题栏



4.1 Requirement level

需求级别

The requirement level “-YX-” shall start with a letter (A, B, C or D), stating the finish classification, followed by a number (1, 2 or 3), stating the exposure level. 要求等级“-YX-”应以字母(a、B、C或D)开头,说明饰面分类,然后是数字(1、2或3),说明暴露等级。

4.1.1 Finish classification

饰面分类

The finish classifications (A, B, C and D) are defined in STD4572. 面漆分类(A、B、C和D)在STD4572中进行了定义。

4.1.2 Exposure level

暴露水平

Table 1 (page 9) presents the exposure levels to state in the surface treatment code for different applications. These are the recommended exposure levels to be stated in order to fulfil the surface treatment directive. 表1(第9页)显示了不同应用的表面处理代码中的状态暴露水平。这些是为满足表面处理指令而规定的建议暴露水平。

4.2 Surface treatment concept

表面处理概念

The surface treatment concept consists of an abbreviation representing how the surfaces of the part shall be coated, or if the material of the part shall be coloured. 表面处理概念由一个缩写组成,表示零件表面应如何涂覆,或者零件材料是否应着色。

The abbreviations for the surface treatment concepts used by Scania are described below. 斯堪尼亚使用的表面处理概念的缩写如下所述。

- PP Organic surface treatment, where the top layer consists of powder paint. 有机表面处理,其中顶层由粉末涂料组成。
- PF Organic surface treatment with powder paint or wet paint. (free of choice) 用粉末涂料或湿漆进行有机表面处理。(自由选择)
- PS Organic surface treatment according to specified method that is stated by a note in the technical documentation. 根据技术文件注释中规定的方法进行有机表面处理。
- IF Flake or electrolytic zinc coating on iron or steel, which shall comply with requirements according to STD4165. 铁或钢上的片状或电解锌涂层,应符合STD4165的要求。
- IS Specific inorganic surface coating. All inorganic surface coatings not specified in STD4165 shall use the designation -IS-. 特殊无机表面涂层。STD4165中未规定的所有无机表面涂层应使用名称-IS-。 Applicable STD, TB or PD, or additional requirements shall be stated in the note. If no requirement documentation is referred to on the drawing, STD4165 applies. 适用的STD、TB或PD或附加要求应在注释中说明。如果图纸上未提及要求文件,则适用STD4165。
- C Coloured Plastic and rubber materials. 彩色塑料和橡胶材料。

4.3 Appearance master

外观大师

If the surface of a part or component shall be surface coated in a specific colour, a Colour standard (CS) shall be stated in the surface treatment code. 如果零件或部件的表面应涂上特定颜色的涂层,则应在表面处理规范中规定颜色标准(CS)。

For coloured plastics, rubber parts and anodised aluminium, the drawing shall be equipped with drawing label SV1268-103, where the TCS is identified according to STD4102. No appearance master shall be stated in the surface treatment code on drawings equipped with this label.

对于彩色塑料、橡胶零件和阳极氧化铝,图纸应配有图纸标签SV1268-103,其中TCS根据STD4102进行识别。在配有该标签的图纸上,表面处理规范中不得说明外观标准。

For information about what CS or TCS should be stated in the technical specification for a specific part, contact RCDS (Colour and Trim). 有关特定零件的技术规范中应说明的CS或TCS的信息,请联系RCDS(颜色和装饰)。

4.4 Exemptions from requirements

免除要求

For parts with exemptions from the requirement standards applied through the surface treatment code (see chapter 6), the following shall be included in the specification:

对于通过表面处理规范(见第6章)适用的要求标准豁免的零件,规范中应包括以下内容:

- A visualisation of the area of the part where the exemption from requirements applies. 适用要求豁免的零件区域的可视化。
- Information about in which standards the exempted requirements are stated. 关于哪些标准中规定了豁免要求的信息。
- A specification of which property is exempted from the requirements, and if this is substituted by any other requirement applicable for this part. 一种特性不受要求约束的规范,如果该规范被适用于本部分的任何其他要求所取代。

一种特性不受要求约束的规范,如果该规范被适用于本部分的任何其他要求所取代。



表1-根据《表面处理指令》(第3章),零件的暴露水平

Table 1 – Exposure level for parts according to the Surface Treatment Directive (chapter 3) ¹⁾

Product area	Exposure level: 暴露水平: 暴露于腐蚀、风化和机械磨损的水平		
	Level of exposure to corrosion, weathering and mechanical wear		
	Minor exposure 轻微暴露 1	Moderate exposure 中度暴露 2	Intense exposure 强烈暴露 3
Cab and bus – interior 驾驶室和公共汽车-内部	Interior cab and bus, never in contact with road mud 内部驾驶室和公交车, 从不接触道路淤泥 <i>Example:</i> Interior window moulding Roof shelf Inner roof panel Instrument panel bracket 示例: 内部车窗饰条车顶框内部车顶板仪表盘支架	Interior cab and bus, occasionally in contact with road mud 内部驾驶室和公共汽车, 偶尔与道路泥浆接触 <i>Example:</i> Handle (bus stanchion) Instrument panel Seat frame Bus interior 把手(母线支柱) 仪表盘 座椅骨架 公交车内部	Not applicable 不适用
Cab and bus – exterior 驾驶室和公共汽车-外部	Not applicable 不适用	Exterior over the door line on cab and bus body 驾驶室和客车车身上车门线上的外部 <i>Example:</i> Roof air deflector 示例: 车顶导流板	Exterior of cab and bus body up to upper edge of door line. 驾驶室和客车车身的上部, 直至车门线的上边缘。 <i>Example:</i> Exterior front Door Sun visor Rear view mirror 示例: 外部前部 门 遮阳板 后视镜
Chassis 机箱	Not applicable 不适用	Upper side of chassis from gearbox and forwards, and inside the frame. 底盘的上侧从变速箱向前, 在车架内部。 <i>Example:</i> Cab bracket Cable duct inside the frame Steering wheel column 示例: 驾驶室支架 车架内的电缆 管方向盘柱	Underside of chassis, and chassis parts positioned behind the gearbox 底盘下侧, 以及位于变速箱后面的底盘零件 <i>Example:</i> Customer adapted painting according to PD1723840. Screws and nuts Trailer connection bracket Air tank Frame side member Chassis-mounted brackets Chassis-mounted pipes 示例: 客户根据 PD1723840 进行涂装。螺钉和螺母拖车连接支架 储气罐 车架侧梁 底盘安装支架 底盘安装管道
Powertrain 动力传动系统	Not applicable 不适用	Engine compartment ²⁾ , and powertrain parts positioned from the gearbox and forwards. 发动机舱 ²⁾ 以及从变速箱向前定位的动力传动系部件。 <i>Example:</i> Cylinder block Valve cover Cylinder head Cool water pipes 动系部件 示例: 气缸体 气门室盖 气缸盖 冷水管	Position from and including the gearbox and backwards. 从齿轮箱(包括齿轮箱)向后定位。 <i>Example:</i> Upper side of gearbox Lower side of gearbox Axles 示例: 齿轮箱上侧齿轮箱下侧 车轴
STD4514-parts (Small parts and fastening systems categorised by STD4514)	See STD4514 for both exposure level and finish classification for parts covered by STD4514. 关于STD4514所涵盖零件的暴露水平和光洁度分类, 请参见STD4514。		

¹⁾ Finish classification, A-D, can be found in STD4572 for all parts not covered by STD4514.

²⁾ See additional specification in section 4.5.2. 对于STD4514未涵盖的所有零件, 表面处理分类A-D可在STD4572中找到。
2) 参见第4.5.2节中的附加规范。

STD4514 零件 (按 STD4114 分类的小型零件和紧固系统)



4.5 Specific properties

特定属性

The following sections contain specific properties that may need to be stated in the technical documentation in addition to the surface treatment code. 除了表面处理规范外，以下章节还包含可能需要在技术文件中说明的特定特性。

4.5.1 STD4514-parts (small parts and fastening systems)

STD4514零件（小零件和紧固系统）

If the part is covered by STD4514, the drawing designation for that part according to STD4514 shall be stated on the drawing of the part. Any applicable notes shall also be included according to the standard. 如果STD4514涵盖了零件，则应在零件图纸上注明根据STD4514的零件图纸名称。根据本标准，还应包括任何适用的注释。

4.5.2 Engine part

发动机零件

All parts in the engine compartment shall be equipped with the following note in the technical documentation: 发动机舱中的所有零件应在技术文件中配备以下注释：

Engine part
发动机零件

4.5.3 Appearance item (AAR)

外观项目（AAR）

A part or component that shall be subject to the Scania appearance approval process (AAR) shall be marked as Appearance item in the technical documentation. The Appearance item requirement shall be stated when either of the following applies. 应通过斯堪尼亚外观审批程序（AAR）的零件或组件应在技术文件中标记为外观项目。当以下任一项适用时，应说明外观项目要求：

- Part or component with finish classification A or B, according to STD4572. 根据STD4572，表面处理等级为A或B的零件或组件。
- Part or component with finish classification C or D, according to STD4572, if the part is accompanied by a styling model (DSM). 如果零件附有造型模型（DSM），则根据STD4572，表面处理等级为C或D的零件或组件。

To label the part or component as an Appearance item, the following shall be stated in the technical documentation: 要将零件或组件标记为外观项目，应在技术文件中说明以下内容：

Appearance item according to STD4246
外观项目符合STD4246

Drawings shall be equipped with drawing label SV1268-74, according to STD4246, to label the part or component as an Appearance item. 根据STD4246，图纸应配有图纸标签SV1268-74，以将零件或组件标记为外观项目。

4.5.4 Mating surfaces on metal parts, including holes

金属零件上的配合面，包括孔

Areas on parts that will be in contact with other surfaces in screw joints shall be marked with the following text¹⁾ in the technical documentation: 零件上与螺纹接头中其他表面接触的区域应在技术文件中标记以下文字：

Mating surface
配合面

¹⁾ Replaces the older designation “contact surface”. 取代旧名称“接触面”。

The area with a radius of 10 mm from the outer edge of a hole, intended for screw joints, shall by default be considered a mating surface. This is not necessary to state in the technical documentation. 默认情况下，距离孔外缘半径为10mm的区域（用于螺纹接头）应视为配合面。这不需要在技术文档中说明。

General requirements for mating surfaces are stated in section 5.2.

第5.2节规定了配合面的一般要求。



4.5.5 **Marks from hanging**

挂起的标记

Marks from hanging are often inevitable in industrial painting. If covered after assembly, they do not affect the durability of the part. Uncovered hanging marks will however affect the corrosion resistance of metal parts, which is not always acceptable.

在工业绘画中，悬挂的痕迹往往是不可避免的。如果在组装后覆盖，它们不会影响零件的耐用性。然而，未覆盖的悬挂标记会影响金属零件的耐腐蚀性，这并不总是可以接受的。

Any hole in the part, where marks from hanging are not allowed, shall be marked in the technical specification with the phrase:

零件上的任何孔，如果不允许悬挂标记，应在技术规范中标记以下内容：

Hole visible after assembly. No mark from paint process allowed.

组装后可见孔。油漆过程中不允许有任何标记。

This does not have to be stated for surfaces with finish classification A or B, where hanging marks never are allowed.

对于表面光洁度等级为A或B的表面，不必说明这一点，在这些表面上永远不允许有悬挂标记。

General requirements on marks from hanging are stated in section 5.3.

悬挂标志的一般要求见第5.3节。

4.5.6 **Only primer painted parts**

仅涂底漆的零件

The following applies to parts that will always be finish painted after delivery. It is not applicable for parts delivered in a state that is sometimes considered finish painted, e.g., by other brands within the TRATON group.

以下适用于交付后始终进行面漆的零件。它不适用于在有时被视为面漆的状态下交付的零件，例如由TRATON集团内的其他品牌交付的零件。

For parts or components that will be delivered to Scania in a primer painted condition, “see note” shall be stated in the box Surface Treatment. The note shall then contain the following information:

其他品牌交付的零件。对于将以底漆喷涂状态交付给斯堪尼亚的零件或组件，“参见注释”应在“表面处理”框中注明。然后，注释应包含以下信息：

- The surface treatment code of the **finish painted part** (STD4111-__-P_-_____)
- The following text:

Part delivered to Scania primer painted
Finish painted by Scania

以下文本：
交付给斯堪尼亚的零件涂底漆

If the method of painting and/or the colour of the primer is defined, this shall be stated in the note as well.

如果规定了底漆的涂装方法和/或颜色，也应在注释中说明。

4.5.7 **MCC A-order painting**

MCC A级喷漆

For parts that are subjected to MCC A-order painting, the following shall be included in the technical documentation:

对于进行MCC A级喷漆的零件，技术文件中应包括以下内容：

- The phrase “MCC A-order painting”
- The surface treatment code for the MCC A-order painted part
E.g., if the surface treatment concept changes (see section 4.2) or if the finish classification changes for the painted version (see STD4572).
- If any surfaces of the part shall remain uncoated
See section 4.5.10.
- If any exemptions from requirements apply to the A-order painted part
See section 4.4.

.短语“MCC A级涂装”

MCC A级涂漆部件的表面处理规范

例如，如果表面处理概念发生变化（见第4.2节），或者如果涂漆版本的饰面分类发生变化（参见STD4572）。

.如果零件的任何表面应保持未涂覆
参见第4.5.10节。

.如果要求豁免适用于A级涂漆零件，请参见第4.4节。



4.5.8 Flake coatings and electrolytic zinc coatings (STD4165)

片状涂层和电解锌涂层 (STD4165)

For flake coatings and electrolytic zinc coatings, the surface treatment concept “IF”¹⁾ shall be used in the surface treatment code. 对于片状涂层和电解锌涂层，表面处理规范中应使用表面处理概念“IF”。

¹⁾ As multiple interchangeable coatings exist in this category, the surface treatment concept “IS” shall be avoided on drawings where flake or electrolytic zinc coatings are intended on the part. 由于该类别中存在多种可互换涂层，如果零件上有片状或电解锌涂层，则应避免在图纸上使用表面处理概念“IS”。

To narrow down the types of coatings applicable to the part, additional requirements shall be indicated in the surface treatment code. 为了缩小适用于零件的涂层类型，应在表面处理规范中注明附加要求。

A general temperature resistance requirement is stated in STD4165. If the surface coating shall be able to withstand higher temperatures, the drawing designation T200 or T300 shall be used. See Table 2. STD4165中规定了一般的耐温性要求。如果表面涂层能够承受更高的温度，则应使用图纸名称T200或T300。见表2。

For parts that need to be electrically conductive, this shall be specified as an additional requirement on the drawing with the text “electrical conductive”. For parts classified by STD4514, the requirements that follow are stated in STD4165. For parts not classified by STD4514, specific requirements shall be stated in the technical documentation. 对于需要导电的零件，应将其作为图纸上的附加要求，文字为“导电”。对于STD4514分类的零件，STD4165中规定了以下要求。对于STD4514未分类的零件，应在技术文件中说明具体要求。

Table 2 – Surface treatment codes for flake coatings and electrolytic zinc coatings

表2-片状涂层和电解锌涂层的表面处理规范

Surface treatment code 表面处理代码	Induced requirements 诱导要求
STD4111-__-IF ¹⁾	General requirements in STD4165 apply. No additional requirements added. STD4165中的一般要求适用。未添加额外要求。
STD4111-__-IF-T200	The surface coating shall resist a temperature of 200°C. See specific requirement in STD4165. 表面涂层应能耐受200摄氏度的温度。具体要求见STD4165。
STD4111-__-IF-T300	The surface coating shall resist a temperature of 300°C. See specific requirement in STD4165. 表面涂层应能耐受300摄氏度的温度。具体要求见STD4165。
STD4111-__-IF-Electrical conductive ²⁾	The surface coating shall be electrically conductive. See specific requirement in STD4165. 表面涂层应具有导电性。具体要求见STD4165。

¹⁾ If an appearance master applies, add the number of the appearance master after “IF” in accordance with Figure 1.

Otherwise, the colour specified by STD4165 applies.

²⁾ For parts not specified by STD4514, the test method and requirements for electrical conductivity shall be stated explicit in the technical documentation. 1) 如果应用外观母版，请根据图1在“IF”之后添加外观母版的编号。否则，适用STD4165规定的颜色。2) 对于STD4514未规定的零件，应在技术文件中明确说明导电性的测试方法和要求。

4.5.9 Corrosion protection agents

腐蚀防护剂

Corrosion protection agents are applied on metal surfaces or areas that may corrode or change in appearance during transport, storage or use. 在运输、储存或使用过程中，防腐剂应用于可能腐蚀或外观变化的金属表面或区域。

The relevant areas shall be marked in the technical documentation for the assembly with one of the following notes: 相关区域应在装配技术文件中标注以下注释之一：

- Marked areas shall, after assembly, be corrosion protected with permanent corrosion protection agent according to ... 组装后，标记区域应根据……使用永久性防腐剂进行防腐处理。
- Marked areas shall, after assembly, be corrosion protected with temporary corrosion protection agent according to ... 组装后，标记区域应根据……使用临时防腐剂进行防腐处理。

The text shall be followed by the relevant STD or PD. See Table 6.

正文后面应紧跟相关STD或PD。见表6。



4.5.10 Uncoated area of surface coated part

表面涂层零件的未涂层区域

Surfaces on a part that are not to be surface coated shall be marked in the technical documentation with one of the following notes: 未进行表面涂层的零件表面应在技术文件中标记以下注释之一:

- Uncoated 未涂覆
- Uncoated, overspray allowed 未涂层, 允许过度喷涂

4.5.11 Anodised aluminium

阳极氧化铝

For anodising of aluminium substrates, the following shall be stated on the drawing.

对于铝基板的阳极氧化, 应在图纸上说明以下内容

STD4111-__-IS, see note

Apply the following note: * 应用以下注释: *

Anodised according to STD4446 根据STD4446进行阳极氧化。

阳极氧化层的厚度应至少为20 μm并密封。

The thickness of the anodised layer shall be minimum 20 μm and sealed.

*For interior parts, 10 μm can be stated instead of 20 μm.

*对于内部零件, 可以指定10um, 而不是20um。

4.5.12 Inorganic plating

无机镀层

For parts that shall be plated with chromium, tin or nickel, the surface treatment concept “IS” shall be used, followed by “see note”. The note shall contain the correct text according to Table 3.

对于应镀铬、镀锡或镀镍的零件, 应使用表面处理概念“IS”, 然后使用“见注释”。注释应包含符合表3要求的正确文本。

Table 3 – Notes applicable to plated parts 表3-适用于电镀零件的注释

Description 描述	Note (to be stated on the drawing) 注释 (在图纸上注明)	Standard 标准
Hard chromium plating 硬镀铬	Hard chromium plating according to STD4343 根据STD4343进行硬镀铬	STD4343
Decorative chromium plating 装饰镀铬	Decorative chromium plating according to STD4346 符合STD4346的装饰镀铬	STD4346
Metallic and other inorganic coatings – Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium	Nickel plating according to ISO 1456 镀镍符合ISO 1456	ISO 1456
Electroplated coating of tin – Specification and test methods 锡电镀层、规范和试验方法	Tin plating according to ISO 2093 镀锡符合ISO 2093	ISO 2093

4.5.13 Hot dip galvanising

热浸镀锌

热浸镀锌是零件上唯一的表面涂层, 只允许用于完成面等级D。“基板(如金属板)的热浸镀锌应在图纸标题栏(见图2)或其他技术文件的材料代码中规定。

Hot dip galvanising as the only* surface coating on a part is only allowed for finish classification D.

*Hot dip galvanizing of a substrate, such as sheet metal, shall be specified in the material code in the title block of the drawing (see Figure 2) or other technical documentation.

The following shall be stated in the technical documentation:

技术文件中应说明以下内容:

STD4111-D_-IS, see note

The following note shall be applied to the drawing:

以下注释应适用于图纸: 根据ISO 1461进行热浸镀锌

Hot dip galvanising according to ISO 1461



4.5.14 Other properties

其他属性

Other specific requirements, not covered by the relevant standards above, shall be stated in the technical documentation. This may cover for example: 技术文件中应说明上述相关标准未涵盖的其他具体要求。这可能包括例如:

- Resistance to additional chemicals.
 - The substance, temperature and duration of exposure shall be specified.
- Other mechanical requirements.
- Part-specific requirement standards or documents, not listed in STD4111 or STD4572.

.对其他化学品的耐受性。

o应规定物质、温度和暴露时间。

.其他机械要求。

.STD4111或STD4572中未列出的零件特定要求标准或文件。



5 General requirements

一般要求

- All requirements regarding surface coated or coloured parts or components concern the properties at delivery to Scania or after being surface coated at a Scania facility.
有关表面涂层或着色零件或组件的所有要求都与交付给斯堪尼亚时或在斯堪尼亚工厂进行表面涂层后的性能有关。
- All suppliers of surface treatment on metal parts shall fulfil the requirements in STD4310.
金属零件表面处理的所有供应商应满足STD4310的要求
- All parts and components shall comply with the environmental requirements in STD4158, STD4159 and STD4400. 所有零部件应符合STD4158、STD4159和STD4400中的环境要求。
- Depending on the surface treatment concept used, the relevant standards in chapter 6 apply. 根据所使用的表面处理概念，适用第6章中的相关标准。
- Dimensioning of surface coated parts shall be according to STD388.
表面涂层零件的尺寸应符合STD388的规定。
- If the technical documentation refers to an old designation or a withdrawn standard, the supplier shall contact Scania for guidance. 如果技术文件涉及旧名称或已撤销的标准，供应商应联系斯堪尼亚寻求指导。
- All parts shall fulfil the relevant finish requirements in standards or specifications directed from STD4572. 所有零件应符合STD4572标准或规范中的相关光洁度要求。

5.1 Requirements on machining and preparation of parts before surface coating

表面涂层前零件的加工和准备要求

The following applies to all metal and plastic substrates prior to application of surface coatings.
在涂覆表面涂层之前，以下内容适用于所有金属和塑料基材。

For edges, the requirements in STD4443 are valid for all materials.
对于边缘，STD4443中的要求适用于所有材料。

For welds and surfaces generally, the requirements according to preparation grade 2 or preparation grade 3 in ISO 8501-3 are valid for steel parts. 对于焊缝和表面，ISO 8501-3中2级或3级制备的要求通常适用于钢制零件。

5.2 Requirements on painting of mating surfaces on metal parts, including holes

金属零件（包括孔）配合面的涂漆要求

The properties of paint applied to a mating surface on a metal part shall fulfil the requirements in STD4113. Requirements on maximum permitted coating thickness exist to minimise the risk for loss of clamping force in the screw joint and the risk that the coating breaks down.

金属零件配合面上的油漆性能应符合STD4113的要求。存在对最大允许涂层厚度的要求，以最大限度地降低螺纹接头中夹紧力损失的风险和涂层破裂的风险。

An area is considered a mating surface

一个区域被视为配合面

- at a radius of 10 mm from the outer edge of a through hole, blind hole or hole with threads intended for screw joints, or 距离通孔、盲孔或螺纹孔外缘10 mm的半径处，或
- when “mating surface” is specified in the technical documentation.
当技术文件中规定了“配合面”时。

Note: Older drawings may contain the term “contact surface” instead of “mating surface”.

注：旧图纸可能包含术语“接触面”，而不是“配合面”。



5.3 Requirements on marks from hanging

悬挂标志要求

The requirements related to hanging marks on parts are stated in sections 5.3.1 and 5.3.2.

第5.3.1节和第5.3.2节规定了与零件上悬挂标记相关的要求。如果需要，

If needed, the supplier shall contact Scania for guidance. 供应商应联系斯堪尼亚寻求指导。

5.3.1 Surfaces with finish classification A or B

表面光洁度等级为A或B的表面

1. Marks from hanging are not allowed.
2. Touch-up painting of marks from hanging is not allowed.

- 1、不允许悬挂标识。
- 2.不允许对悬挂的标记进行补漆。

5.3.2 Surfaces with finish classification C or D

表面光洁度等级为C或D的表面

1. Marks from hanging shall be avoided in areas labelled with: "Hole visible after assembly. No mark from paint process allowed" 1) 2)
2. If mounting or hanging cannot be avoided in locations marked according to point 1., the hanging marks shall be touch-up painted in the same colour as the surrounding areas.

- 1.应避免在标有以下内容的区域悬挂标记：“组装后可见孔。不允许有油漆过程中的标记” 1) 2)

3. For surfaces with finish classification D, marks from hanging are accepted at any location, unless otherwise stated in the technical documentation.

3.对于光洁度等级为D的表面，除非技术文件中另有规定，否则任何位置都可以接受悬挂的标记。

1) This is required to avoid touch-up painting for painted parts.

2) Applies to all phrases of similar meaning. 1)这是为了避免对涂漆零件进行补漆。
2)适用于所有含义相似的短语，

6 Scania standards for different surface coating systems and substrates

适用于不同表面涂层系统和基材的斯堪尼亚标准

Table 4, Table 5 and Table 6 specify the Scania standards that apply for different surface coating systems and substrates. Note that the listed standards often contain references to additional requirement standards. Additional standards may also be specified in the technical documentation.

表4、表5和表6规定了适用于不同表面涂层系统和基材的斯堪尼亚标准。请注意，列出的标准通常包含对附加需求标准的引用。技术文件中也可能规定其他标准。

See also Annex A for detailed examples and interpretations of requirements.

有关要求的详细示例和解释，请参见附录A。

A visual overview of the internal documentation at Scania, related specifically to surface properties, can be found in Annex B. 斯堪尼亚内部文件的视觉概述，特别是与表面特性相关的文件，可在附件B中找到。

Table 4 – Requirements standards for organic coatings and for coloured plastics

表4-有机涂层和彩色塑料的要求标准

Substrate 基底	Surface treatment 表面处理	Location 地方	Only primer painted 仅涂底漆	Finish painted 涂漆饰面	Requirement standards 要求标准
Metal 金属	Paint STD4111-__-P_-_____	Exterior or Interior	X		STD4111, chapter 5 STD4572, chapter 5 STD4113
		Exterior or Interior		X	
Plastic 塑料	Paint STD4111-__-P_-_____	Exterior	X		STD4111, chapter 5 STD4572, chapter 5 STD4121
		Exterior		X	STD4111, chapter 5 STD4572, chapter 5 STD4121
		Interior		X	STD4111, chapter 5 STD4572, chapter 5 STD4571
	Coloured plastic STD4111-__-C	Exterior or Interior			STD4111, chapter 5 STD4572, chapter 5



表5-无机表面处理要求标准
Table 5 – Requirement standards for inorganic surface treatments

Substrate 基底	Surface treatment 表面处理	STD4514-part	Requirement standards 要求标准
Metal 金属	Flake coating or electrolytic zinc coating STD4111-__-IF-_____	Yes	STD4111, chapter 5 STD4572, chapter 5 STD4514 STD4165
		No	STD4111, chapter 5 STD4572, chapter 5 STD4165
Metal 金属	Hard chromium plating STD4111-__-IS	No	STD4111, chapter 5 STD4343
Metal 金属	Decorative chromium plating STD4111-__-IS-_____	No	STD4111, chapter 5 STD4572, chapter 5 STD4346
Plastic 塑料		No	STD4111, chapter 5 STD4572, chapter 5 STD4346
Aluminium 铝	Natural anodising STD4111-__-IS	No	STD4111, chapter 5 STD4572, chapter 5 STD4446
Metal 金属	Nickel plating STD4111-__-IS	No	STD4111, chapter 5 ISO 1456
	Tin plating STD4111-__-IS	No	STD4111, chapter 5 ISO 1461
	Hot dip galvanising STD4111-__-IS	No	STD4111, chapter 5 ISO 2093

表6-防腐剂
Table 6 – Corrosion protection agents

Situation 情况	Requirement standards ¹⁾ 要求标准
Anti-corrosion agents for vehicles – under body protection 车辆用防腐蚀剂-车身上保护	STD4345
Permanent corrosion protection agents 永久性防腐剂	STD4354
Anti-corrosion Agents for Hollows and Crevices in Truck Cabs 卡车驾驶室孔洞和缝隙的防腐剂	STD4355

¹⁾ The requirement standards listed in Table 6 shall be stated implicit in the technical documentation according to section 4.5.9. 表6中列出的要求标准应根据第4.5.9节在技术文件中明确规定。



7 Designer responsibility

设计师责任

The designer is responsible for defining the correct requirements in the technical documentation for parts and components. 设计者负责在零部件的技术文件中定义正确的要求。

The following are the minimum topics that shall be considered:

以下是应考虑的最高主题:

- Designation of surface properties (chapter 4)
表面特性的指定 (第4章)
 - Small parts or fastening systems (section 4.5.1 and STD4514)
小零件或紧固系统 (第4.5.1节和STD4514节)
 - Finish classification (STD4572)
饰面分类 (STD4572)
 - Exposure level (section 4.1.2, Table 1)
暴露水平 (第4.1.2节, 表1)
 - Surface treatment concept (section 4.2)
表面处理概念 (第4.2节)
 - Appearance master (section 4.3)
外观大师 (第4.3节)

- Specific requirements
具体要求
 - Exemptions from requirements (section 4.4)
要求豁免 (第4.4节)
 - Engine part (section 4.5.2)
发动机零件 (第4.5.2节)
 - Appearance item (section 4.5.3)
外观项目 (第4.5.3节)
 - Mating surfaces (section 4.5.4)
配合面 (第4.5.4节)
 - Holes where hanging marks are not allowed (section 4.5.5)
不允许有悬挂标记的孔 (第4.5.5节)
 - Primer or finish painted when delivered to Scania (section 4.5.6)
交付给斯堪尼亚时喷涂的底漆或面漆 (第4.5.6节)
 - MCC A-order painting (section 4.5.7)
MCC A级涂装 (第4.5.7节)
 - Temperature resistance (section 4.5.8)
耐温性 (第4.5.8节)
 - Electrical conductivity (section 4.5.8)
电导率 (第4.5.8节)
 - Corrosion protection agents (section 4.5.9)
防腐剂 (第4.5.9节)
 - Other specific requirements (section 4.5.14)
其他具体要求 (第4.5.14节)

- Different requirements on different areas
不同领域的不同要求
 - Areas with different finish classifications (STD4572)
具有不同饰面分类的区域 (STD4572)
 - Areas hidden after assembly (Finish classification D, STD4572)
组装后隐藏的区域 (完成面分类 D, STD4572)
 - Areas that are not to be surface coated (section 4.5.10)
未进行表面涂层的区域 (第4.5.10节)

- Other related topics
其他相关主题
 - Dimensions of the part prior to surface treatment (STD388)
表面处理前的零件尺寸 (STD388)

Instructions and guidelines for the technical documentation can be found in chapter 4 and in the examples in Annex A. 技术文件的说明和指南见第4章和附件A中的示例。



8 Referenced documents

参考文件

References to standards, other than STD or CVS, refer to the highest level of the international standards (e.g. ISO or EN). International standards may be available as national editions at the respective national standardisation organisation (e.g. SS-ISO, SS-EN, DIN ISO, etc.).

除STD或CVS外，对标准的引用是指最高级别的国际标准（如ISO或EN）。国际标准可在相应的国家标准化组织（如SS-ISO、SS-EN、DIN ISO等）以国家版本提供

8.1 Normative references

规范性引用文件

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the issue cited applies. For undated references, the latest issue of the referenced document (including any amendments) applies.

以下文件在文本中的引用方式使其部分或全部内容构成本文件的要求。对于注日期的参考文献，仅引用的问题适用。对于未注明日期的引用文件，其最新版本（包括任何修订）适用。

STD388	<i>Dimensioning of coated parts</i>
STD804	<i>Documentation rules for technical regulation</i>
STD1029	<i>Title blocks for product drawings</i>
STD3152	<i>Hydrogen embrittlement</i>
STD4081	<i>Documentation rules for technical product data – PD</i>
STD4101	<i>Organic surface treatment – Surface appearance</i>
STD4102	<i>Appearance Masters for colours, textures and fabrics</i>
STD4113	<i>Organic surface treatment – Painting of metals – Requirements</i>
STD4121	<i>Organic surface treatment – Exterior plastics – Requirements</i>
STD4158	<i>Chemical substances which shall not be used – Scania Black list– General</i>
STD4159	<i>Chemical substances with limited use - Scania Grey list – General</i>
STD4165	<i>Corrosion protection surface coatings – Flake coatings and electrolytic zinc coatings</i>
STD4246	<i>Scania Appearance Approval Process</i>
STD4291	<i>Phosphate conversion coatings</i>
STD4310	<i>Requirements for suppliers of surface treatment</i>
STD4314	<i>Surface requirements – plastics part</i>
STD4343	<i>Hard chromium plating</i>
STD4345	<i>Anti-corrosion agents for vehicles – under body protection</i>
STD4346	<i>Decorative chromium plating</i>
STD4354	<i>Permanent corrosion protection agents</i>
STD4355	<i>Anti-corrosion agents for hollows and crevices in truck cabs</i>
STD4378	<i>Appearance requirements of chrome plated polymer parts – exterior applications</i>
STD4400	<i>Prohibited and restricted substances in Scania's products</i>
STD4443	<i>Edges of Undefined Shape – Burrs, Undercuts and Passings – Vocabulary, indications and recommendations</i>
STD4446	<i>Anodised aluminium</i>
STD4472	<i>Electrical conductivity for fasteners</i>
STD4514	<i>Categorization of small parts, fastening systems and their coatings</i>
STD4571	<i>Organic surface treatment – Painting of interior plastics – Requirements</i>
STD4572	<i>Surface Finish and Zone Classification</i>
ISO 1456	<i>Metallic and other inorganic coatings – Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium</i>
ISO 1461	<i>Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods</i>
ISO 2093	<i>Electroplated coating of tin – Specification and test methods</i>
ISO 10074	<i>Anodizing of aluminium and its alloys -- Specification for hard anodic oxidation coatings on aluminium and its alloys</i>
Scania Lexicon	<i>Scania Lexicon is Scania's corporate term database.</i>

8.2 Informative references

参考资料

See Annex B.



Annex A (informative) Drawing designation examples and their interpretation

附录A (资料性) 图纸名称示例及其解释

A.1 Tables of content for material examples and surface treatment codes

A.1材料示例和表面处理代码的目录

Table 7 states which example in section A.2 is appropriate depending on the specific combination of substrate and surface treatment materials. Table 8 states which example in section A.2 is appropriate depending on the specific surface treatment code stated in the technical documentation.

表7说明了第A.2节中的哪个示例是合适的，具体取决于基材和表面处理材料的具体组合。表8说明了第A.2节中的哪个示例是合适的，具体取决于技术文件中规定的特定表面处理规范。Please note that old drawing designations can deviate from the examples below.

请注意，旧的图纸名称可能与以下示例有所不同

Table 7 – Table of content for different material examples 表7-不同材料示例的目录

Example number	Example content
Example 1 to Example 6	Metal part with flake coating or electrolytic zinc coating
Example 6 and Example 9	Engine part
Example 7 to Example 9	Finish painted metal part
Example 10 to Example 11	Metal part that is only primer painted at delivery to Scania and shall be finish painted by Scania
Example 12	Plastic part that is only primer painted at delivery to Scania and shall be finish painted by Scania
Example 13	Unpainted plastic part that will be painted by Scania
Example 14	Finish painted plastic part for exterior use
Example 15	Finish painted plastic part for interior use
Example 16	Coloured plastic part
Example 17	Anodised aluminium
Example 18	Part with a top layer of decorative chromium
Example 19	Part with a top layer of hard chromium
Example 20	Part with differentiated requirement levels
Example 21	Part with exemptions from requirements
Example 22	MCC A-order painting of part
Example 23	Permanent corrosion protection agents
Example 24	Metal part with phosphate conversion coating

表8-第A.2节中描述不同表面处理代码的示例

Table 8 – Examples in section A.2 describing different surface treatment codes

Drawing designation	Example
STD4111-__-C	Example 16 and Example 22
STD4111-__-IF	Example 1 to Example 6
STD4111-__-IS	Example 17 to Example 19
STD4111-__-PF	Example 7, Example 12 to Example 15, and Example 20 to Example 22
STD4111-__-PP	Example 8
STD4111-__-PS	Example 9 to Example 11
STD4291-P2	Example 24



A.2 Examples of surface treatment codes and interpretations

A.2表面处理规范和解释示例

Note that the surface finish classifications, exposure levels and appearance masters stated in the following section are examples, and shall be determined based on the exact application according to chapter 4. 请注意，下一节中所述的表面光洁度分类、暴露水平和外观大师只是示例，应根据第4章的具体应用进行确定。

Example 1

示例1

Metal part with surface coatings based on flake coatings or electrolytic zinc coatings

- Requirement level B2

具有基于片状涂层或电解锌涂层的表面涂层的金属零件

- Temperature resistance requirement 80°C

-需求级别B2
-耐温要求80C

Indication in the box “Surface treatment”: “表面处理”框中的指示:

STD4111-B2-IF

STD4111-B2-IF

Explanation to the specification above 对上述规范的解释

STD4111: Reference to STD4111.

B: Reference to requirements based on finish classification B in STD4572.

2: Reference to exposure level 2 according to Table 1.

IF: Reference to surface treatment concept IF (see section 4.2) and requirements (including colour) based on requirement level B2 in STD4165.

参考STD4111。

参考STD4572中基于饰面分类B的要求。

参照表1中的暴露水平2。

参考表面处理概念IF (见第4.2节) 和基于STD4165中B2级要求的要求 (包括颜色)。

Example 2

示例2

Metal part with surface coating based on flake coatings or electrolytic zinc coatings

- Requirement level C3

具有基于片状涂层或电解锌涂层的表面涂层的金属零件

- Temperature resistance requirement 80°C

-C3级需求
-耐温要求80C

Indication in the box “Surface treatment”: “表面处理”框中的指示:

STD4111-C3-IF

Explanation to the specification above 对上述规范的解释

STD4111: Reference to STD4111.

C: Reference to requirements based on finish classification C in STD4572.

3: Reference to exposure level 3 according to Table 1.

IF: Reference to surface treatment concept IF (see section 4.2) and requirements (including colour) based on requirement level C3 in STD4165.

参考STD4111。

参考STD4572中基于饰面分类C的要求。

参照表1中的暴露水平3。

参考表面处理概念IF (见第4.2节) 和基于STD4165中C3级要求的要求 (包括颜色)。



Example 3

示例3

Metal part with surface coating based on specific electrolytic zinc coatings

- Requirement level B3

- Temperature resistance requirement 80°C

- Electrical conductive

具有基于特定电解锌涂层的表面涂层的金属零件

-B3级需求

-耐温要求80C

-导电性

Indication in the box “Surface treatment”: “表面处理” 框中的指示:
See note 见注释

Note with text: 带文字的注释:
STD4111-B3-IF-Electrical conductive STD4111-B3-IF导电

Explanation to the specification above 对上述规范的解释

- STD4111: Reference to STD4111.
- B: Reference to requirements based on finish classification B in STD4572.
- 3: Reference to exposure level 2 according to Table 1.
- IF: Reference to surface treatment concept IF (see section 4.2) and requirements (including colour) based on requirement level B3 in STD4165.
- Electrical conductive: Reference to general and specific requirements on electrical conductivity in STD4165. 参考STD4111。
导电性: 参考STD4572中基于饰面分类B的要求。参照表1中的暴露水平2。
参考表面处理概念IF（见第4.2节）和基于STD4165中B3级要求的要求（包括颜色）。
参考STD4165中关于导电性的一般和具体要求。

Example 4

示例4

Metal part with surface coating based on flake coatings or electrolytic zinc coatings

- Requirement level B3

- Temperature resistance requirement 200°C

具有基于片状涂层或电解锌涂层的表面涂层的金属零件。

-要求等级B3

-耐温度要求200C

Indication in the box “Surface treatment”: “表面处理” 框中的指示:
STD4111-B3-IF-T200

Explanation to the specification above 对上述规范的解释

- STD4111: Reference to STD4111.
- B: Reference to requirements based on finish classification B in STD4572.
- 3: Reference to exposure level 3 according to Table 1.
- IF: Reference to surface treatment concept IF (see section 4.2) and requirements (including colour) based on requirement level B3 in STD4165.
- T200: Reference to specific temperature resistance requirement T200 in STD4165. 参考STD4111。
参考STD4572中基于饰面分类B的要求。
参照表1中的暴露水平3。
参考表面处理概念IF（见第4.2节）和基于STD4165中B3级要求的要求（包括颜色）。
参考STD4165中的耐特定温度要求T200。

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要下载或阅读全文，请访问：<https://d.book118.com/395330043243012122>