

	GAMESA PART REQUIREMENTS 歌美飒零件要求	Code: 代码: GPR91001-en	Rev: 版本: 1
		Date: 日期: 08/02/13	Pg. 1 of 27 第 1 页, 共 27 页
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INDEX 索引

1	SCOPE	5	1	范围	5
2	DEFINITIONS AND ACRONYMS	5	2	定义和缩写	5
3	REFERENCES	5	3	参考文件	5
4	GENERAL REQUIREMENTS	6	4	一般要求	6
4.1	QUALIFICATION	6	4.1	评定	6
4.2	QUALIFIED PRODUCTS, PRODUCT CHANGES AND REQUALIFICATION	6	4.2	合格的产品、产品变更和重新评定	6
4.3	BATCH	6	4.3	批次	6
4.4	TRACEABILITY	6	4.4	可追溯性	6
4.5	HAZARDOUS CONSTITUENTS	7	4.5	危险成分	7
4.6	WRITTEN COMMUNICATION	7	4.6	书面交流	7
5	SPECIFIC REQUIREMENTS	7	5	具体要求	7
5.1	FASTENERS	7	5.1	紧固件	7
5.1.1	PROPERTY CLASS	7	5.1.1	性能等级	7
5.1.2	CHEMICAL COMPOSITION	7	5.1.2	化学成分	7
5.1.3	THREADING MANUFACTURE	7	5.1.3	螺纹切削制造	7
5.1.4	HEAD FORMING	7	5.1.4	头部成型	7
5.1.5	HEAT TREATMENT	7	5.1.5	热处理	7
5.2	TOWER ASSEMBLIES	8	5.2	塔筒组件	8
5.3	NUTS	8	5.3	螺母	8
5.4	WASHERS	8	5.4	垫圈	8
6	CORROSION PROTECTION	8	6	防腐	8
6.1	CARBON STEEL AND ALLOY STEEL BOLTED CONNECTIONS ELEMENTS	8	6.1	碳钢和合金钢螺栓连接元件	8
6.2	TOWER ASSEMBLIES	9	6.2	塔筒组件	9
6.3	STAINLESS STEEL BOLTED CONNECTIONS ELEMENTS	9	6.3	不锈钢螺栓连接元件	9
7	ACCEPTANCE INSPECTION	9	7	验收检验	9
8	CRITICITY OF FASTENERS	9	8	紧固件的临界性	9
9	COMPONENT APPROVAL PACKAGE (CAP) REQUIREMENTS	9	9	部件审批包 (CAP) 的要求	10
9.1	DESTRUCTIVE TESTING	10	9.1	破坏性试验	10
9.1.1	CARBON STEEL AND ALLOY STEEL FASTENERS	10	9.1.1	碳钢和合金钢紧固件	10
9.1.2	STAINLESS STEEL FASTENERS	12	9.1.2	不锈钢紧固件	12
9.1.3	CARBON STEEL AND ALLOY STEEL NUTS	13	9.1.3	碳钢和合金钢螺母	13
9.1.4	STAINLESS STEEL NUTS	13	9.1.4	不锈钢螺母	13
9.1.5	WASHERS	13	9.1.5	垫圈	13

GAMESA PART REQUIREMENTS 歌美飒零件要求	Code: 代码: GPR91001-en	Rev: 版本: 1
	Date: 日期: 08/02/13	Page. 2 of 27 第 2 页, 共 27 页
GENERAL BOLTING 通用螺栓连接		

9.1.6	CORROSION PROTECTION	13	9.1.6	防腐	13
9.2	NON-DESTRUCTIVE TESTING	14	9.2	非破坏性试验	14
10	INSPECTION REQUIREMENTS: SERIAL PRODUCTION	14	10	检验要求: 批量生产	14
10.1	DESTRUCTIVE	14	10.1	破坏性	14
10.1.1	CARBON STEEL AND ALLOY STEEL FASTENERS	14	10.1.1	碳钢和合金钢紧固件	14
10.1.2	STAINLESS STEEL FASTENERS	17	10.1.2	不锈钢紧固件	14
10.1.3	CARBON STEEL AND ALLOY STEEL NUTS..	17	10.1.3	碳钢和合金钢螺母	17
10.1.4	STAINLESS STEEL NUTS	17	10.1.4	不锈钢螺母	17
10.1.5	WASHERS	18	10.1.5	垫圈	18
10.1.6	CORROSION PROTECTION	18	10.1.6	防腐	18
10.2	NON-DESTRUCTIVE TESTING	18	10.2	非破坏性试验	18
11	TRACEABILITY	19	11	可追溯性	19
12	MARKING	19	12	标记	19
13	DELIVERY	19	13	交付	19
14	DOCUMENTATION	19	14	文件	19

RECORD OF CHANGES 变更记录

Rev.	Date	Author	Description
版本	日期	作者	说明
00	04/10/10	EREAL/ JRM	The present document replaces EQ630001 本文件替代 EQ630001。 General revision and updating. 全面修订和更新 Critical bolting definition added in according with internal design codes. 根据 设计规范增加关键螺栓连接的定义。 Low temperature references removed, based on Note 1 of the Scope of ISO 898-1:2009 根据 ISO 898-1: 2009 适用范围的“注 1”, 删除了低温参考文件。 Corrosion requirements updated. Black oxide coating included. 更新了腐蚀要求。包括黑色氧化层。 Requirements for stainless steel elements included. 加入了不锈钢元件的要求。
01	04/10/10	EREAL/ JRM	Scope extended to all fasteners regardless its size. 适用范围扩大到各种尺寸的所有紧固件。 Format revised and updated 修订和更新了格式 Definition of criticality of fasteners reviewed 定义了已审查的紧固件的临界性。 Criterion for marking updated 更新了标记标准 Zinc Nickel plating included 加入了锌镍电镀

GAMESA PART REQUIREMENTS 歌美飒零件要求	Code: 代码: GPR91001-en	Rev: 版本: 1
	Date: 日期: 08/02/13	Page. 3 of 27 第 3 页, 共 27 页
GENERAL BOLTING 通用螺栓连接		

1 SCOPE

This specification describes the requirements to be fulfilled by general bolting to be used in GAMESA wind turbines. These requirements should be demonstrated by supplier on GAMESA's demand.

Note that although ISO 898-1 is applicable to bolts, screws and studs with sizes up to M39 its designation system may be applied for sizes outside of its scope provided that all applicable requirements stated in this part of ISO 898 are met. Since, regardless the size, the mentioned requirements are covered by this specification, the designation system, testing methods and acceptance criteria of ISO 898-1 are applied to all carbon steel and alloy steel fasteners to be used in GAMESA in spite of the considered size.

During manufacturing process validation documentation shall be given in a CAP (Component Approval Package).

Once First Article Validation has been completed, then reduced inspection level shall be applied (less documentation shall be required), provided manufacturing process is within its limits.

2 Definitions And Acronyms

Fastener - The term fastener will be used when bolts, studs, and screws are considered all together.

Bolt - A fastener with the head integral with the shank and which is threaded at the opposite end. Typically the full length of the shank is not threaded.

Stud - A fastener threaded at both ends, one end of which (the metal end) is screwed into parent metal and the other end of which (the nut end) takes a nut.

Screw - A fastener with the head integral with the shank and which is threaded at the opposite end. Typically the full length of the shank is threaded.

tZn - Hot dip galvanizing

3 REFERENCES

This specification incorporates dated or undated reference provisions from other publications. For

1 范围

本规范介绍了歌美飒风机中所使用的通用螺栓连接的要求。应当根据歌美飒公司的需求阐述这些要求。

请注意, 虽然 ISO898-1 适用于 M39 以内各种尺寸的螺栓、螺钉和螺柱, 但是如果满足 ISO 898 中此部分所述的所有适用要求, 则该牌号表示方法可适用于其适用范围以外的尺寸。由于本规范所涉及的上述要求不考虑尺寸, 因此 ISO898-1 的牌号表示方法、试验方法和验收标准适用于各种尺寸歌美飒风机中所使用的所有碳钢和合金钢紧固件。

生产过程中, 应以 CAP (部件审批包) 的形式提供验证文件。

完成首件检验后, 如果生产工艺在其极限范围内, 则应降低检验等级 (减少需要的文件)。

2 定义和缩写

紧固件-该术语用来指螺栓、螺柱和螺钉的统称。

螺栓-头部与柄部成一体, 另一端可进行螺纹连接的紧固件。通常柄部的全长不带螺纹。

螺柱-两端都带有螺纹, 其一端 (金属端) 拧入母材而另一端 (螺母端) 拧入螺母的紧固件。

螺钉-头部与柄部成一体, 另一端可进行螺纹连接的紧固件。通常柄部的全长带螺纹。

tZn-热浸镀锌

3 参考文件

本规范包括引自其他出版物的注明日期或者未注明日期的参考条文。仅有当修订版的修改中有所涉及时, 注

GAMESA PART REQUIREMENTS 歌美飒零件要求	Code: 代码: GPR91001-en	Rev: 版本: 1
	Date: 日期: 08/02/13	Page. 4 of 27 第 4 页, 共 27 页
GENERAL BOLTING 通用螺栓连接		

dated references, subsequent amendments to or revisions of any of these publications apply to this specification only when incorporated in it by amendment of revision. For undated references the latest edition of the publication referred shall be applied.

明日期的引用文件, 后续的所有修改或修订或任何这些出版物才适用于本规范。凡是未注日期的引用文件适用于所涉及出版物的最新版本。

EN 10204	Metallic products. Types of inspection documents 金属产品。检验文件的类型
ISO 898-1	Mechanical properties of fasteners made of carbon steel and alloy steel Part 1- Fasteners, screws and studs 碳钢和合金钢紧固件的机械性能第 1 部分-紧固件、螺钉和螺柱
ISO 898-2	Mechanical properties of fasteners Part 2- Nuts with specified proof load values Coarse threaded 紧固件的机械性能第 2 部分-具有规定验证载荷值的粗螺纹螺母
ISO 3506-1	Mechanical properties of corrosion-resistant stainless steel fasteners - Part 1: Bolts, screws and studs 耐腐蚀不锈钢紧固件的机械性能-第 1 部分: 螺栓、螺钉和螺柱
ISO 3506-2	Mechanical properties of corrosion-resistant stainless steel fasteners - Part 2: Nuts 耐腐蚀不锈钢紧固件机械性能-第 2 部分: 螺母
ISO 4759-1	Tolerances for fasteners, part 1- Fasteners, screws, studs and nuts – Product grades A, B, and C 紧固件公差第 1 部分-紧固件、螺钉、螺柱和螺母-产品等级 A、B 和 C
ISO 4759-3	Tolerances for fasteners, part 3- Plain washers for Fasteners, screws and nuts – Product grades A, and C 紧固件公差第 3 部分-紧固件、螺钉和螺母的平垫圈-产品等级 A、B 和 C
ISO 6157-1	Fasteners – Surface discontinuities Part 1- Fasteners, screws and studs for general requirements 紧固件-表面不连续性第 1 部分-紧固件、螺钉和螺柱的一般要求
ISO 6157-3	Fasteners – Surface discontinuities Part 3- Fasteners, screws and studs for special requirements 紧固件-表面不连续性第 3 部分-紧固件、螺钉和螺柱的特殊要求
ISO 10684	Fasteners – Hot dip galvanized coatings 紧固件-热浸镀锌层
ISO 10683	Fasteners – Non-electrolytically applied zinc flake coatings 紧固件-非电解锌片涂层
ISO 4042	Fasteners - Electroplated coatings 紧固件-电镀层
ISO 9227	Corrosion tests in artificial atmospheres -- Salt spray tests 人造大气腐蚀试验-盐雾试验
ISO 148-1	Metallic materials - Charpy pendulum impact test - Part 1: Test method 金属材料-却贝摆式冲击试验-第 1 部分: 试验方法:
EN 14399-4	High-strength structural bolting assemblies for preloading - Part 4: System HV - Hexagon bolt and nut assemblies

GAMESA PART REQUIREMENTS 歌美飒零件要求	Code: 代码: GPR91001-en	Rev: 版本: 1
	Date: 日期: 08/02/13	Page. 5 of 27 第 5 页, 共 27 页
GENERAL BOLTING 通用螺栓连接		

	预加负荷用高强度结构螺栓组件-第 4 部分: HV 系统-六角螺栓和螺母组件
EN 14399-6	High-strength structural bolting assemblies for preloading - Part 6: Plain chamfered washers 预加负荷用高强度结构螺栓组件-第 6 部分: 平面倒角垫圈
DASSt-Richtlinie 021	Schraubenverbindungen aus feuerverzinkten Garnituren M 39 bis M 64 entsprechend DIN 6914, DIN 6915, DIN 6916
DIN 50938	Black oxide treatment of ferrous products - Requirements and testing 铁制品的黑氧化处理-要求和试验
GTS73001	Tightening torque test specification 力矩测试规范
GMS16130	Offshore Electroplating Systems 海上电镀系统
GPS16130	Offshore Electroplating Process 海上电镀工艺
PBE-1-016-R01	Chemical Products, Substances in Articles and Dangerous Goods Assessment 商品与危险货物中化学品、化学成分的评估

4 GENERAL REQUIREMENTS**4 一般要求****4.1 QUALIFICATION****4.1 评定**

The material covered by this specification shall be a product which has been tested and comply with the characteristics specified herein.

本规范所涉及的材料必须经测试符合本文规定特性的产品。

4.2 QUALIFIED PRODUCTS, PRODUCT CHANGES AND REQUALIFICATION**4.2 合格的产品、产品变更和重新评定**

No deviation from approved method of manufacture is permitted without prior written approval from GAMESA Materials & Processes Directorate. Any change by the manufacturer may be cause for re-qualification. A change is defined as, but not limited to: material specification or manufacturing process changes, raw material source or supply changes product and/or manufacture location.

事先 歌美飒材料与工艺部的书面批准, 不允许违背已批准的生产方法。制造商的任何变更都可能需要重新评定。变更定义为, 但不限于: 材料规格或生产工艺的变更、原材料或供应源变更、产品和/或生产地点的变更。

4.3 BATCH**4.3 批次**

Batch is defined as an identifiable quantity of material of the same alloy, grade, heat, heat treatment, product form and size, regardless its length, subjected to inspection at one time.

批量定义为一次检验中不论长度的相同合金、等级、温度、热处理、产品形式和尺寸物料可识别的数量。

Minimum batch size consideration depends on heat treatment capability assessment from technical audit and quality record evidences.

最小批量大小取决于热处理能力和基于技术审核和质量记录证据的评估。

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