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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 26958.21-2020

**Geometrical product specifications (GPS). Filtration - Part 21:
Linear profile filters: Gaussian filters**

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Foreword

GB/T 26958 "Geometric Technical Specifications for Products (GPS) Filtering" is divided into 89 parts, and the following 12 parts have been released:

- Part 1: Overview and basic concepts;
- Part 20: Basic concepts of linear contour filters;
- Part 21: Linear contour filter Gaussian filter;
- Part 22: Linear contour filter spline filter;
- Part 28: End effect of contour filter;
- Part 29: Linear contour filter spline wavelet;
- Part 30: Basic concepts of robust contour filter;
- Part 31: Robust contour filter Gaussian regression filter;
- Part 32: Robust contour filter spline filter;
- Part 40: Basic concepts of morphological contour filter;
- Part 41: Morphological contour filter disc and horizontal line segment filter;
- Part 49: Morphological contour filter scale space technology;

This part is part 21 of GB/T 26958:

This section was drafted in accordance with the rules given in GB/T 1:1-2009:

The translation method used in this part is equivalent to the ISO 16610-21:2011 "Geometric Technical Specification for Products (GPS) Filtering Part 21: Line

Characteristic contour filter Gaussian filter:

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows:

---JJF1001-2011 General measurement terms and definitions (ISO /IEC Guide99:2007, MOD);

---JJF1059:1-2012 Measurement Uncertainty Evaluation and Expression (ISO /IEC Guide98-3:2008, MOD):

This section has made the following editorial changes:

---Rewrite Appendix D in accordance with the requirements of GB/T 20308-2020:

This part is proposed and managed by the National Standardization Technical Committee for Product Geometric Technical Specifications (SAC/TC240):

Drafting organizations of this section: Huazhong University of Science and Technology, Shaanxi Weir Mechanical and Electrical Technology Co., Ltd., Beijing Times Peak Technology Co., Ltd., Shandong Road

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1 Scope

This part of GB/T 26958 specifies the metrological characteristics of Gaussian filters for contour filtering, and gives the long wave and

Shortwave component method:

This section applies to the extraction of surface profile roughness features, and other signal filtering and analysis occasions can be used as a reference:

2 Normative references

The following documents are indispensable for the application of this document: For dated reference documents, only the dated version applies to this article

Pieces: For undated references, the latest version (including all amendments) applies to this document:

GB /Z 26958:1-2011 Product Geometric Technical Specification (GPS) Filtering Part 1:
Overview and Basic Concepts (ISO /

TS16610-1:2006, IDT)

GB /Z 26958:20-2011 Geometric Technical Specifications for Products (GPS) Filtering Part
20: Basic Outline of Linear Contour Filter

Read (ISO /T S16610-20:2006, IDT)

ISO /IEC Guide 98-3:2008 Measurement Uncertainty Evaluation and Expression

[Uncertaintyofmeasurement-Part 3:Guide

totheexpressionofuncertaintyinmeasurement(GUM:1995)]

ISO /IEC Guide 99:2007 General Metrology Terms and Definitions

[Internationalvocabularyofmetrology-Basicand

generalconceptsandassociatedterms(VIM)]

3 Terms and definitions

The terms and definitions defined in GB /Z 26958:1, GB /Z 26958:20, ISO /IEC Guide 98-3
and ISO /IEC Guide 99 are applicable to

This document: For ease of use, some terms and definitions in GB /Z 26958:1 and GB /Z
26958:20 are listed repeatedly below:

3:1

Linear profile filter linearprofilefilter

A contour filter that divides the contour into long wave and short wave components:

[GB /Z 26958:20-2011, definition 3:1]

3:2

Openprofile openprofile

A surface profile with two end points and a finite length:

[GB /Z 26958:1-2011, definition 3:7]

3:3

Closedprofile

Surface profile with no endpoints and limited length:

[GB /Z 26958:1-2011, definition 3:8]