

Doc.-No.: VA-7.2.1-001

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### **ANNEX A:**

Following standards are included within the flexible scope of accreditation category A according to DAkkS rule "R-17025-PL (7.8.4)".

 Industrial Computed Tomographie (ICT): not applicable (only house procedure)

 Industrial Metrology Technique (IMT): not applicable (only house procedure)

#### Materialography (MAT):

VDA 19 Part 1 2015	Inspection of Technical Cleanliness – Particulate Contamination of Functionally Relevant Automotive Components <sup>1</sup>
ISO 16232 2018-12	Road vehicles - Cleanliness of components and systems <sup>2</sup>
VDG P201 2002-05	Volume deficits of castings made of non-ferrous metals
VDG P202 2010-09	Volume Deficits of Castings Made from Aluminium, Magnesium, and Zinc Casting Alloys
DIN 30901 2016-12	Heat treatment of ferrous materials - Determination of the depth and form of appearance of the internal oxidation
DIN 50190-3 1979-03 (withdrawn)	Hardness depth of heat-treated parts; Determination of the effective depth of hardening after nitriding
DIN 50190-4 1999-09 (withdrawn)	Hardness depth of heat-treated parts; Determination of the fusion hardening depth and the fusion depth

<sup>1</sup> Chapter: 8.3.2 SEM/EDX, 8.3.4 Raman spectroscopy and 8.3.5 IR (infrared spectroscopy)

<sup>&</sup>lt;sup>2</sup> Chapter: 9.3.2 SEM/EDX, 9.3.4 Raman spectroscopy and 9.3.5 IR (infrared spectroscopy)



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### **ANNEX A (continuation):**

Following standards are included within the flexible scope of accreditation category A according to DAkkS rule "R-17025-PL (7.8.4)".

### - Materialography (MAT):

DIN EN 10328 2005-04 (withdrawn)	Iron and steel - Determination of the conventional depth of hardening after surface heating
DIN EN ISO 643 2020-06	Steels - Micrographic determination of the apparent grain size
DIN EN ISO 1463 2021-08	Metallic and oxide coatings - Measurement of coating thickness - Microscopical method
DIN EN ISO 2639 2003-04 (withdrawn)	Steels - Determination and verification of the depth of carburized and hardened cases
DIN EN ISO 18203 2022-07	Steel - Determination of the thickness of surface-hardened layers
DIN EN ISO 6507-1 2024-01	Metallic materials - Vickers hardness test - Part 1: Test method
DIN EN ISO 9015-2 2016-10	Destructive tests on welds in metallic materials - Hardness testing - Part 2: Microhardness testing of welded joints
DIN EN ISO 17639 2022-05	Destructive tests on welds in metallic materials – Macroscopic and microscopic examination of welds

#### Technical Cleanliness (TecSa):

VDA 19	Inspection of Technical Cleanliness – Particulate
2004	Contamination of Functionally Relevant Automotive
	Components <sup>3</sup>

<sup>&</sup>lt;sup>3</sup> chapter D, E, F.1 to F.4



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#### - Technical Cleanliness (TecSa):

VDA 19 Part 1 2015	Inspection of Technical Cleanliness – Particulate Contamination of Functionally Relevant Automotive Components <sup>4</sup>
ISO 4405 2022-07	Hydraulic fluid power - Fluid contamination - Determination of particulate contamination by the gravimentric method
ISO 4407 2002-04	Hydraulic fluid power - Fluid contamination - Determination of particulate contamination by the counting method using an optical microscope
ISO 16232 2018-12	Road vehicles - Cleanliness of components and systems <sup>5</sup>

#### - Chemical Analytics (CHA):

VDA 19 Part 1 2015	Inspection of Technical Cleanliness – Particulate Contamination of Functionally Relevant Automotive Components <sup>6</sup>
DIN EN ISO 11357-1 2023-06	Plastics - Differential scanning calorimetry (DSC) - Part 1: General principles
DIN EN ISO 11357-2 2020-08	Plastics - Differential scanning calorimetry (DSC) - Part 2: Determination of glass transition temperature and step height
DIN EN ISO 11357-3 2018-07	Plastics - Differential scanning calorimetry (DSC) - Part 3: Determination of temperature and enthalpy of melting and crystallization
DIN EN ISO 11358-1 2022-07	Plastics - Thermogravimetry (TG) of polymers - Part 1: General principles

<sup>&</sup>lt;sup>4</sup> except chapter 8.3.3 LIBS, 8.3.6 X-ray microtomography and 8.4 Shortened analysis

<sup>&</sup>lt;sup>5</sup> except chapter 9.3.3 LIBS, 9.3.6 X-ray microtomography and 9.4 Shortened analysis

<sup>&</sup>lt;sup>6</sup> here chapter 8.3.2 SEM-EDS, 8.3.4 Raman and 8.3.5 IR (infrared-spectroscopy)



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### Chemical Analytics (CHA):

DIN ISO 22309 2015-11	Microbeam analysis - Quantitative analysis using energy- dispersive spectrometry (EDS) for elements with an atomic number of 11 (Na) or above
Ph.Eur.11.2	Investigation or identification of unknown substances
2.2.24	in organic and inorganic materials by means of
<mark>2024-06</mark>	Fourier transform infrared spectroscopy (FTIR)
and	
ASTM E1252	Standard Practice for General Techniques for Obtaining
1998	Infrared Spectra for Qualitative Analysis