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# ***Independent Practitioner's Reasonable Assurance Report***

Heraeus Deutschland GmbH & Co. KG  
Hanau

Reasonable assurance engagement on the Refiner's Compliance Report  
for Heraeus Deutschland GmbH & Co. KG for the period 1 January to  
31 December 2016

Auftrag: 0.0815128.001





## **Independent Practitioner's Limited Assurance Report**

To Heraeus Deutschland GmbH & Co. KG

We have been engaged by Heraeus Deutschland GmbH & Co. KG, Hanau, (the "Refiner") to perform a reasonable assurance engagement on the Refiner's Compliance Report prepared by the Refiner for the business group "Heraeus Deutschland GmbH & Co. KG " (HDE) as defined in Table 5 of the Compliance Report for the period 1 January to 31 December 2016 (the "Refiner's Compliance Report").

### *Management's Responsibility*

The Management of the Refiner is responsible for the preparation and presentation of the Refiner's Compliance Report in accordance with the LBMA Responsible Gold Guidance (version 6) as of August 14, 2015, as well as the Supplement on Tin, Tantalum and Tungsten of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas as of April 2016 (hereafter the "Guidance").

This responsibility includes establishing appropriate risk management and internal controls from which the reported information is derived. The criteria identified by management as relevant for demonstrating compliance with the Guidance are the activities described in the Refiner's Compliance Report. Furthermore, the responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Refiner's Compliance Report, which is free of material misstatements due to intentional or unintentional errors.

### *Audit Firm's Independence and Quality Control*

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

The audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Institut der Wirtschaftsprüfer ("Institute of Public Auditors in Germany; IDW"): Requirements to quality control for audit firms ("Entwurf eines IdW Qualitätssicherungsstandards 1 „Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis" (IdW EQS 1)") – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

In conducting our engagement, we confirm that we satisfy the criteria for assurance providers as set out in the Guidance to carry out the assurance engagement.

### *Practitioner's Responsibility*

Our responsibility is to express an opinion on the Refiner's Compliance Report based on our work performed. Within the scope of our engagement we did not perform an audit on external sources of information or expert opinions, referred to in the Refiner's Compliance Report.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" published by IAASB and the supplementary guidance set out in the LBMA Responsible Gold Programme - Third Party Audit Guidance (version 3) as of March 11, 2016 (the "Audit Guidance"). This Audit Guidance requires that we plan and perform the assurance engagement to obtain reasonable assurance that the Refiner's Compliance Report

prepared by the Refiner for the business group Heraeus Deutschland GmbH & Co. KG (HDE) for the period 1 January to 31 December 2016, in all material respects, describes fairly the activities undertaken during the year to demonstrate compliance, and management's overall conclusion contained therein is in accordance with the requirements of the LBMA Responsible Gold Guidance (version 6) as of August 14, 2015, as well as the Supplement on Tin, Tantalum and Tungsten of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas as of April 2016.

The procedures selected depend on the practitioner's judgement. This includes the assessment of the risks of material misstatements of the Refiner's Compliance Report with regard to the Guidance. Within the scope of our work we performed amongst others the following procedures:

- Interviews with the compliance officers in charge of the preparation of the Refiner's Compliance Report;
- Interviews with management and employees of departments in charge of recycling, purchasing, material management and trading;
- Inspection of relevant corporate guidelines and documents describing the management systems, due diligence and risk management approach towards a responsible supply chain;
- Review of documentation of requirements on the group-wide processes for collecting, analysing and aggregating data on the supply chain of gold, tin, tantalum and tungsten;
- Performance of site visits at the Refiner's locations in Hanau (Germany) and Hong Kong (China) as part of the inspection of relevant systems, processes and controls; including process walkthroughs from supplier selection to materials receipt and lot processing;
- Evaluation of the consistency of the statements provided in the Refiner's Compliance Report with the findings obtained during our engagement.

#### *Inherent limitations*

Non-financial information, such as that included in the Refiner's Compliance Report, is subject to more inherent limitations than financial information, given the more qualitative characteristics of the subject matter and the methods used for determining such information. The methods used by the Refiner to comply with the Guidance may differ. It is important to read the Refiner's conflict minerals supply chain policy available in the download section on Refiner's website:

<http://herae.us/conflictminerals>

#### *Conclusion*

In our opinion and based on our reasonable assurance procedures performed, as described above, the Refiner's Compliance Report, prepared by Heraeus Deutschland GmbH & Co. KG, Hanau, for the business group Heraeus Deutschland GmbH & Co. KG (HDE) for the period 1 January to 31 December 2016, in all material respects, describes fairly the activities undertaken during the year to demonstrate compliance, and management's overall conclusion contained therein is in accordance with the requirements of the LBMA Responsible Gold Guidance (version 6) as of August 14, 2015, as well as the Supplement on Tin, Tantalum and Tungsten of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas as of April 2016.

*Restriction on Use and Distribution*

We issue this report on the basis of the engagement agreed with the Refiner. The audit has been performed for purposes of the Refiner and is solely intended to inform the Refiner about the results of the audit. The report is not intended for any third parties to base any (financial) decision thereon. We do not assume any responsibility towards third parties.

We refer to the fact that the Refiner's Compliance Report subject to our assurance engagement comprises the Annex "List of countries of origin of mined gold". In accordance with the LBMA Responsible Gold Guidance (version 6) and the treatment of the Refiner this Annex detailing the countries of origin of mined gold has to be submitted to the LBMA Executive only and does not need to be disclosed publicly.

Munich, 15 March 2017

**PricewaterhouseCoopers GmbH**  
**Wirtschaftsprüfungsgesellschaft**

Hendrik Fink  
Wirtschaftsprüfer  
(German Public Auditor)

ppa. Axel Faupel

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## *Appendix*

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General Terms of Engagement: Allgemeine Auftragsbedingungen für Wirtschaftsprüfer  
und Wirtschaftsprüfungs-gesellschaften vom 1. Januar 2002

# Heraeus Compliance Report 2016 for HDE

Table 1: Refiner's details	
Refiner's name	Heraeus Deutschland GmbH & Co. KG - HDE
Entities and locations	Please refer to addendum Table 5 – HDE is creating this Compliance Report also on behalf of the entities and locations listed in this addendum
Reporting year-end	31.12.2016
Date of Report	2017-02-03
Senior Management at HDE responsible for this report:	Rolf Wetzel, CFO of HDE: <a href="mailto:rolf.wetzel@heraeus.com">rolf.wetzel@heraeus.com</a>
<p>Heraeus, the technology group headquartered in Hanau, Germany, is a leading international family-owned company formed in 1851. With expertise, a focus on innovations, operational excellence and an entrepreneurial leadership, we strive to continuously improve the businesses of our customers around the world.</p> <p>We create high-quality solutions for our customers and strengthen their long-term competitiveness by combining material expertise with technological know-how. Our ideas are focused on important issues such as the environment, energy, health, mobility and industrial applications. Our portfolio ranges from components to coordinated material systems, which are used in a wide variety of industries, including the steel, electronics, chemical, automotive and telecommunications industries.</p> <p>In the 2015 financial year, Heraeus generated revenues without precious metals of €1.9 bn and a total revenue of €12.9 bn. With approximately 12,500 employees worldwide in more than 100 subsidiaries in 38 countries, Heraeus holds a leading position in its global markets.</p> <p>In 2016, the Foundation for Family Businesses named Heraeus as one of the “Top 10 Family Businesses” in Germany. More: <a href="http://www.heraeus.com">www.heraeus.com</a></p> <p>Heraeus Deutschland GmbH &amp; Co. KG - HDE is one of the largest Gold refiners globally.</p> <p>Its Hong Kong based Gold refinery Heraeus Ltd. alone is refining more than 200 tons of Gold annually (2016). Further Heraeus Gold refiners are located in Hanau, Newark and Santa Fee Springs.</p> <p>This Heraeus Compliance Report covers the selected refining and downstream companies mentioned in the addendum Table 5, that belong to Heraeus.</p>	

## Heraeus Evaluation

Table 2: Summary of activities undertaken to demonstrate compliance	
<b>Step 1: Establish strong company management systems</b>	
<b>Compliance Statement with Requirement:</b> We have fully complied with Step 1: Establish strong management systems.	
<b>1. Has the refiner adopted a company policy regarding due diligence for supply chains of Gold, Tin, Tantalum, and Tungsten?</b>	
The Heraeus group has adopted a company-wide policy binding for all entities (including HDE's refinery and downstream entities) regarding due diligence for the supply chain of conflict minerals including Gold, Tin, Tungsten and Tantalum as well as other precious metals.	
<b>Comments and Demonstration of Compliance:</b> Already in 2007 we started formalizing our supply chain policy for Precious Metals, which is based on our Code of Conduct and an integral part of our responsibility-conscious management structure.	



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HDE operates strictly in accordance with “LBMA Responsible Gold Guidance and the “OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas” – Third edition April 2016.

In 2016 we merged our internal “sourcing policy” and “guideline for acceptance of precious metals” into our new “guideline for sustainable sourcing” which further strengthens our corporate efforts to comply with the model set out in the Annex II of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas. This sets out our responsibility for conducting risk based due diligence, screening and monitoring of all transactions and governance structures in place. The latest supply chain policy can be found on our website in the downloads section:

[www.herae.us/conflictminerals](http://www.herae.us/conflictminerals)

## 2. Has the refiner set up an internal management structure to support supply chain due diligence?

Heraeus Precious Metals has set up an internal management structure to support supply chain due diligence.

### Comments and Demonstration of Compliance:

An internal management system has been set up to define the governance, roles and responsibilities, internal audit, communication and senior management review as per the adopted policy. A compliance officer has been assigned on group level to design, supervise and review the overall process and is supported by local compliance officers of all entities included in this report. The compliance officer has a direct reporting line to the executive committee.

## 3. Has the refiner established a strong internal system of due diligence, controls and transparency over the supply chains of Gold, Tin, Tantalum and Tungsten, including traceability and identification of other supply chain actors?

### Comments and Demonstration of Compliance:

#### Refiner units:

We have a robust ‘lot’ receipts process, and specific documents must be received and transactional details entered before we process any gold-bearing and other conflict materials, including Tin, Tantalum and Tungsten. Each lot received is accurately registered in our transactional system and ensures complete traceability within our production streams. Specific controls regarding received materials are carried out before processing incoming material as outlined in our internal guidelines.

#### Downstream units:

We have a robust ‘lot’ receipts process, and specific documents must be received and transactional details entered before we process any gold-bearing and other conflict materials, including Tin, Tantalum and Tungsten, to ensure, that all raw material used for our products are conflict free.

Specific controls regarding received materials are carried out before processing incoming material as outlined in our internal guidelines.

Regular training of our employees ensures that our guidelines are followed through; any form of non-conformance is unacceptable and reported to the compliance officer and senior management.

No such escalation was necessary during the reporting period.

## 4. Has the refiner strengthened company engagement with Gold, Tin, Tantalum and Tungsten supplying counterparties, and where possible, assist Gold, Tin, Tantalum and Tungsten supplying counterparties in building due diligence capabilities?

### Comments and Demonstration of Compliance:

In 2012 we started the process to further modify our supplier agreements so that they make reference to the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas and the latest version of “Code of Conduct for Precious Metal Suppliers of Heraeus” can be found on our website under in the downloads section.

All new suppliers have to sign the latest version of our “Code of Conduct for Precious Metal Suppliers of Heraeus” before we are entering into a new business relationship. We are renewing our due diligence checks for all our suppliers every one, two or three years based on our risk assessment and the results are archived in a database.

We conducted several successful audits of our mining partners to verify they are in line with the requirements set forth in our supply chain guideline, with special focus on Child labor, Human rights and environmental issues.

In the reporting year, we have again engaged in various business organizations like IPA (International Platinum organization), EPMF (European Precious Metals Federation, FVEM (Fachvereinigung Edelmetalle)

# Heraeus Compliance Report 2016 for HDE

and other events organized for Heraeus' customers to promote awareness and due diligence measurements regarding Gold, Tin, Tantalum, and Tungsten and Heraeus commitment in this regard. We were also encouraged in promoting a binding regulation for the currently discussed new EU regulation on conflict minerals through engagement in above mentioned business organizations. We also started discussions with the German "Federal Institute for Geosciences and Natural Resources" to look for opportunities to directly support local mining communities in Africa, Asia or South America.

## 5. Has the refiner established a company-wide communication mechanism to promote broad based employee participation and risk identification to management?

### Comments and Demonstration of Compliance:

Heraeus has developed a mechanism allowing employees to voice concerns over the Gold, Tin, Tantalum and Tungsten supply chain or other identified risks regarding conflict minerals or other compliance issues. A functional mailbox has been established which is reviewed by the compliance officer of the Heraeus group. We implemented in 2013 an external Compliance Hotline, where suspected compliance violations can be reported to the ombudsman by e-mail in any language or by telephone in German and English. That information was widely published throughout our organization. No concerns were raised by employees in the reporting year 2016 with regards to conflict minerals.

## Step 2: Identify and assess risks in the supply chain

### Compliance Statement with Requirement:

We have fully complied with Step 2: Identify and assess risks in the supply chain.

## 1. Does the refiner have a process to identify risks in the supply chain?

Heraeus has processes in place to identify the risks in the supply chain

### Comments and Demonstration of Compliance:

We identify and assess risks in the supply chain. For every supplier we have established a client database and allocated a risk profile according to our risk profile criteria. This process is a formal requirement before entering any business relationship with any Precious Metals counterparty, including but not limited to Gold as well as Tin, Tungsten and Tantalum supplying counterparties. Our due diligence process is carried out on a risk-based approach and follows our requirements as outlined in our "Code of Conduct for Precious Metal Suppliers of Heraeus". We used proper process modelling techniques to map our KYC process – separated for Gold and 3T. We use these process models as a reference, to identify possible risks in our supply chain and ideal training tools. Process modelling techniques are an integral part of our management system. We fine-tuned the IT-based workflow in our KYC process to further standardize this process and give system-based guidance on the risk rating. Besides monitoring government regulations and reports from United Nations, we use various resources to be informed about conflict free minerals issues like newsletter from Business organizations, reports of NGO's and screening the internet on a regular basis. We further formalized this step and have now a list of NGO's we are regularly monitoring. The results of that screening are evaluated and help us further strengthening our risk identifying steps. Based on this screening we extended our list of high-risk countries in 2016 again to include now in addition El Salvador, Egypt, Lebanon, Turkey and Ukraine. For partners from those country enhanced due diligence measures apply. These steps are included in our general Risk Management System, which also requires regular review of those documents – at least annually.

## 2. Does the refiner assess risks in light of the standards of their due diligence system?

Heraeus assesses the risk in light of the standards of our due diligence system

### Comments and Demonstration of Compliance:

#### Refiner units:

Supply chain due diligence comprising all measures required by the LBMA is performed before entering into a business relationship with any Gold, Tin, Tantalum and Tungsten supplying counterpart. We performed enhanced due diligence for higher risk categories, which includes all gold-bearing mining material and where Gold potentially originates from or transits via conflict affected areas and areas with human rights abuse, child labor or other high risk factors. In addition, we conduct appropriate scrutiny and monitoring of transactions undertaken through the course of the relationship following a risk based approach.

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Downstream units:

For supply of Gold, Tin, Tungsten and Tantalum we acknowledge the certification of LBMA and EICC for conflict free smelters.

Our global procurement team requests all our 3T suppliers to use only certified “conflict-free” smelters as defined by the CFSI – [www.conflictreesourcing.org/](http://www.conflictreesourcing.org/)

In case our due diligence assessment leaves any doubts we request additional documentations from our partners. We might suspend our business relationship with existing partners or refuse to open a relationship with new partners. To enforce our supply chain policy in the reporting year, we refused to enter into new business relationships with a notable number of potential partners, especially in the case of Gold supply.

**3. Does the refiner report risk assessment to the designated manager?**

**Comments and Demonstration of Compliance:**

The compliance officers and their teams assess the potential risks in-line with Heraeus internal guidelines as well as the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas as set out in the Annex II. If high risks are identified with new or existing business partners the Compliance Officer will deny acceptance of new business partner or cancel business with existing partners.

Only if the business disagrees with the assessment of the compliance officer, the issue will be escalated to the CEO or CFO for final decision; no such escalation was necessary during the reporting period.

Senior management retains the ultimate control and responsibility for the supply chain of Gold, Tin, Tungsten and Tantalum.

**Step 3: Design and implement a management system to respond to identified risks**

**Compliance Statement with Requirement:**

We have fully complied with Step 3: Design and implement a management system to respond to identified risks.

**1. Has the refiner devised a strategy for risk management of an identified risk by either (i) mitigation of the risk while continuing to trade; (ii) mitigation of the risk while suspending trade or (iii) disengagement from the risk**

Heraeus has devised a strategy for risk management of an identified risk by either (i) mitigation of the risk while continuing to trade; (ii) mitigation of the risk while suspending trade or (iii) disengagement from the risk.

**Comments and Demonstration of Compliance:**

Heraeus has set-up an automated and ongoing screening of all business partners for identifying risks in the supply chain. In addition and based on the risk assessment a regular re-assessment of all business partners and transactions is established. In addition any ad-hoc identified risk brought up by any stakeholder will be carefully assessed by the compliance officer and his team and necessary actions/measures decided.

Based on our risk management we had to reject again a notable number of potential partners and to suspended dealing with existing ones, especially in the case of our Gold supply chain. Depending on the additional documentation provided, we could either reopen the account again or kept it blocked

**2. Where a management strategy of risk mitigation is undertaken, it should include measureable steps to be taken and achieved, monitoring of performance, periodic reassessment of risk, and regular reporting to designated senior management.**

**Comments and Demonstration of Compliance:**

Corresponding procedures are in place and are –if necessary – applied accordingly. In case our risk assessment identifies medium or high risks, we actively approach our suppliers to receive further information like proof of origin. If we cannot mitigate our risk assessment to at least medium risk level, we will terminate our supply agreement.

In the reporting period, we request further documentation from two of our major 3T supplier before continuing our relationship.

**Step 4: Arrange for an independent third-party audit of the supply chain due diligence**

**Compliance Statement with Requirement:**

We have fully complied with Step 4: Arrange for an independent third-party audit of the supply chain due diligence.

# Heraeus Compliance Report 2016 for HDE

## Comments and Demonstration of Compliance:

Heraeus has successfully passed the audits without instances of non-compliance for 2012-2015 and we again engaged the services of assurance provider PwC Germany for a reasonable assurance audit in 2016; these reports can be viewed in the download section:

[www.herae.us/conflictminerals](http://www.herae.us/conflictminerals)

## Step 5: Report on supply chain due diligence

### Compliance Statement with Requirement:

We have fully complied with Step 5: Report on supply chain due diligence.

### Comments

Further information and details of how Heraeus' systems, procedures, processes and controls have been implemented to align to the specific requirements in the *LBMA Responsible Gold Guidance* as well as the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas" – Third edition April 2016 have been set out in our supply chain policy which is available on our company website's download sections:

[www.herae.us/conflictminerals](http://www.herae.us/conflictminerals)

## Heraeus overall conclusion

Table 3: Management conclusion	
<b>Is the refiner in compliance with the requirements of the LBMA Responsible Gold Guidance and the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas for the reporting period?</b>	
<b>YES</b>	In conclusion, Heraeus implemented effective management systems, procedures, processes and practices to conform to the requirements of the LBMA Responsible Gold Guidance as well as the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas" – Third edition April 2016 - as explained above in Table 2, for the reporting year ending 31 <sup>st</sup> of December 2016. Heraeus strives to continuously improve, and any corrective actions identified will be implemented and monitored internally on a regular basis by its compliance and responsibility team.

## Other details

Table 4: Other report comments
If readers of this report wish to provide any feedback to Heraeus please contact the HDE compliance officer at: <a href="mailto:juergen.mueller@heraeus.com">juergen.mueller@heraeus.com</a> .

## Addendum

Table 5: Relevant for the audit are the following Heraeus companies:		
Business Group: <b>Heraeus Deutschland - HDE</b>	<b>Value Chain Step</b>	<b>Locations:</b>
Heraeus Deutschland GmbH & Co. KG	Refiner (LBMA GD Status)	Hanau, Germany
Heraeus Ltd.	Refiner (LBMA GD Status)	Hong Kong; People's Republic of China
Heraeus Metals Germany GmbH and Co. KG	Downstream	Hanau, Germany

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Heraeus Sensor Technology GmbH	Downstream	Kleinostheim, Germany
Heraeus Metals Hong Kong Ltd.	Downstream	Hong Kong; People's Republic of China
Heraeus Metals Shanghai Ltd.	Downstream	Shanghai; People's Republic of China
Heraeus Metals New York LLC	Downstream	New York, USA
Heraeus Precious Metals North America Conshohocken LLC	Downstream	Conshohocken, USA
Heraeus Precious Metals North America LLC	Refiner (COMEX listed for Au, Pd and Pt)	Newark, NJ, & Santa Fee Springs, CA; USA
Heraeus Medical Components, LLC	Downstream	St. Paul, MN; USA
Heraeus Medical Components Caribe, Inc.	Downstream	Dorado; Puerto Rico
Heraeus Materials Singapore Pte. Ltd.	Downstream	Singapore
Heraeus Materials Malaysia Sdn Bhd	Downstream	Malaysia
Heraeus Materials S.A.	Downstream	Yverdon; Switzerland
Heraeus South Africa (Pty.) Ltd.	Downstream	Port Elizabeth; South Africa
Heraeus Materials Technology Shanghai Ltd.	Downstream	Shanghai; People's Republic of China
Heraeus Zhaoyuan Changshu Electronic Materials Co., Ltd.	Downstream	Changshu; People's Republic of China
Heraeus Zhaoyuan Precious Metal Materials Co. Ltd.	Downstream	Zhaoyuan; People's Republic of China
Heraeus Materials Technology Taiwan Ltd	Downstream	Taipei; Taiwan
Heraeus Romania S.r.l. (RO)	Downstream	Chisoda; Romania
Heraeus Tokmak A.S.	Downstream	Izmir; Turkey
Heraeus Oriental HiTec Co., Ltd.	Downstream	Incheon; South Korea

Hanau, February 3rd 2017

i.V. Dr. Juergen Mueller-Schaefer