

## 【全部查證區域各類別溫室氣體排放量】

類別	溫室氣體排放量 (單位：公噸二氧化碳當量)	保證等級
類別一	2,717.2881	合理保證等級
類別二	3,317.0553	合理保證等級
類別三	1,247.6538	有限保證等級
類別四	754.1056	有限保證等級
類別五	NS	N/A
類別六	NS	N/A
直接與間接溫室氣體總排放量	8,036.103	

\*NS: Non significant 不顯著；N/A: Not available 無判定

亞瑞仕國際驗證股份有限公司(以下簡稱 ARES)經由高興昌鋼鐵股份有限公司提出申請 ISO 14064-1:2018 查證，依據 ISO 14064-3:2019 之要求執行直接與間接溫室氣體排放量之查證，溫室氣體排放量涵蓋期間自 2024 年 01 月 01 日至 2024 年 12 月 31 日，查證意見內容說明如下：

#### 保證等級

ARES 依據查證準則執行查證程序，證據結果顯示高興昌鋼鐵股份有限公司提出之溫室氣體主張符合規定，未違反實質性差異門檻 5%，符合合理保證等級(類別 1~2)，有限保證等級(類別 3~6)。

#### 查證目標

ARES 獨立客觀的取得支持溫室氣體主張揭露資訊的佐證，確保報告資訊符合準確性、完整性、一致性及透明度之準則，其內容無錯誤或遺漏之項目。

#### 查證範圍

ARES 確認高興昌鋼鐵股份有限公司依據 ISO 14064-1:2018 溫室氣體—第 1 部：組織層級溫室氣體排放與移除之量化及報告附指引之規範執行提出組織邊界及營運範圍內之人為活動溫室氣體排放量與相關標準要求之符合性，根據 ISO 14064-3:2019 準則提出上述保證意見涵蓋內容如下：

(1) 查證期間：2024 年 1 月 1 日至 2024 年 12 月 31 日。

(2) 查證場址：

場區名稱

場區地址

- |         |                    |
|---------|--------------------|
| • 總公司   | • 高雄市鼓山區中華一路 318 號 |
| • 屏南廠   | • 屏東縣枋寮鄉東海村永翔路 2 號 |
| • 台北分公司 | • 台北市大同區涼州街 62 號   |

(3) 查證溫室氣體種類：二氧化碳(CO<sub>2</sub>)、甲烷(CH<sub>4</sub>)、氧化亞氮(N<sub>2</sub>O)、氫氟碳化物(HFCs)、全氟碳化物(PFCs)、六氟化硫(SF<sub>6</sub>)、三氟化氮(NF<sub>3</sub>)，並參照 IPCC 最新公布溫室氣體一覽表。

(4) 溫室氣體排放量化計算之全球暖化潛勢(GWP)引用 IPCC 2021 第 6 次評估報告之全球暖化潛勢值，電力排放係數引用經濟部能源署公布之 2023 年電力排碳係數:0.494 公斤二氧化碳當量/度計算。

意見中須含完整的查證範圍、目標、標準和調查結果，否則意見無效。The opinion must contain the complete scope of verification, objectives, criteria and findings, otherwise the opinion is invalid.

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#### 查證原則

ARES 執行第三方公正獨立客觀查證溫室氣體主張揭露資訊與現場相關佐證，確保報告資訊符合準確性、完整性、一致性及透明度之準則，其內容包含錯誤或遺漏之程度，符合性之實質性差異門檻判斷準則為 5%，查證過程包含文件審查、行前評估、抽樣計畫、證據蒐集，取得查證意見需要之資訊，確保溫室氣體排放量準確性。

#### 保密性聲明

此報告及附件可能包含屬於高興昌鋼鐵股份有限公司之機密資訊，未經高興昌鋼鐵股份有限公司書面同意，其他個人、團體或公司禁止自行複製或發行。

#### 利益衝突迴避聲明

此報告及附件內容完全依照主管機關之標準方法與程序等相關規定，秉持公正、誠實進行查證作業。絕無虛偽不實，如有違反，就政府機構所受損失願負連帶賠償責任之外，並接受主管機關依法令所為之行政處分及刑事處罰。本公司與受查證單位並無財務投資之關係，且符合主管機關對利益衝突迴避之要求。如有違反前述事實情事，經主管機關查證屬實時，此報告及附件內容願接受主管機關判定為無效之處分。

#### 查證團隊

ARES 查證團隊依據公正獨立客觀查證過程，提出高興昌鋼鐵股份有限公司之 2024 年 1 月 1 日至 2024 年 12 月 31 日溫室氣體排放量意見。

ARES 主導查證員：



備註：本查證意見遵照 ARES 溫室氣體查證服務條款要求，意見書內容由亞瑞仕國際驗證股份有限公司依據溫室氣體主張之查證結果進行編製，業經客戶同意後發行。本意見書非用以解除客戶遵守組織章程、全國或者地方法令，以及任何被發佈國際指南章程之責任；客戶與 ARES 彼此為獨立之個體，客戶非受 ARES 約束，在此 ARES 除客戶之外毋須代表其面對其他組織團體。

意見中須含完整的查證範圍、目標、標準和調查結果，否則意見無效。The opinion must contain the complete scope of verification, objectives, criteria and findings, otherwise the opinion is invalid.

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【The GHG emission of each category reported organization be verified】

Category	GHG Emissions (Unit: tonnes CO <sub>2</sub> e)	Assurance level
Category1	2,717.2881	Reasonable assurance level
Category2	3,317.0553	Reasonable assurance level
Category3	1,247.6538	Limited assurance level
Category4	754.1056	Limited assurance level
Category5	NS	N/A
Category6	NS	N/A
Direct emissions and Indirect emissions	8,036.103	

\*NS: Non significant ; N/A: Not available

ARES International Certification Co., Ltd. (ARES) received the application from KAO HSING CHANG IRON & STEEL CORP. for ISO 14064-1:2018, and implements direct and indirect verification in accordance with ISO 14064-3:2019 requirements verification of greenhouse gas emissions, the period covered by greenhouse gas emissions is from January 1, 2024 to December 31, 2024, and the contents of the verification opinion are explained as follows:

#### Level of Assurance

ARES followed the inspection procedures in accordance with the verification criteria, and the evidence results showed that the greenhouse gas claims proposed by KAO HSING CHANG IRON & STEEL CORP. met the regulations, did not violate the material difference threshold of 5%, and met the reasonable assurance level (Category1~2), limited assurance level (Category3~6).

#### Objective

The purposes of this verification exercise are, by review of objective evidence, to independently review: whether the GHG emissions are as declared by the organization's GHG assertion and the data reported are accurate, complete, consistent, transparent and free of material error or omission.

#### Scope

ARES confirmed that KAO HSING CHANG IRON & STEEL CORP. has implemented in accordance with ISO 14064-1:2018 Greenhouse Gases - Part 1: Quantification and Reporting of Greenhouse Gas Emissions and Removals at the Organizational Level with Guidelines with relevant standard requirements to propose the compliance of the GHG emissions from human activities within the organization boundary and operation scope. The above-mentioned assurance opinions based on the ISO 14064-3:2019 guidelines include the following content:

(1) GHG Inventory period : From 2024/01/01 to 2024/12/31.

(2) Verification of site :

Name of site	Address of site
• HQ	• No. 318, Zhonghua 1st Rd., Gushan Dist., Kaohsiung City, Taiwan.
• Ping-Nan Plant	• No. 2, Yongxiang Rd., Fangliao Township, Pingnan Industrial Park, Pingtung County, Taiwan.
• Taipei Branch	• No. 62, Liangzhou Street, Taipei City, Taiwan.

意見中須含完整的查證範圍、目標、標準和調查結果，否則意見無效。The opinion must contain the complete scope of verification, objectives, criteria and findings, otherwise the opinion is invalid.

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- (3) Verify the types of greenhouse gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), nitrogen trifluoride (NF<sub>3</sub>), and refer to the newest public GHG list by IPCC.
- (4) The global warming potential (GWP) calculated by the quantitative calculation of greenhouse gas emissions refers to the global warming potential value of the AR 6 assessment report of IPCC 2021, and the electricity emission coefficient refers to the 2023 electricity emission coefficient announced by the Energy Administration of the Ministry of Economic Affairs: 0.494 kgCO<sub>2</sub>e/kWh calculated.

#### **Materiality**

ARES implements a third-party impartial, independent and objective verification of GHG claims disclosure information and on-site corroboration to ensure reporting information comply with the standards of accuracy, completeness, consistency and transparency, the content of which contains errors or omissions. The threshold for material difference is 5%, and the verification process includes document review, pre-trip assessment, sampling plan, evidence search collect the information needed to verify the declaration and ensure the accuracy of GHG emissions.

#### **Confidentiality**

This report and its attachments may contain confidential information belonging to KAO HSING CHANG IRON & STEEL CORP., and other individuals, groups or companies are prohibited from copying or distributing it without the written consent of KAO HSING CHANG IRON & STEEL CORP.

#### **Avoidance of Conflict of Interest**

The contents of this report and its attachments are in full compliance with the standard methods and procedures of the competent authority and conduct inspections in a fair and honest manner. There is no falsehood. If there is any violation, in addition to being jointly and severally liable for the losses suffered by the government agency, it will also accept administrative sanctions and criminal penalties as ordered by the competent authority.

ARES has no financial investment relationship with the inspected unit, and complies with the requirements of the competent authority to avoid conflicts of interest. If there are any violations of the aforementioned facts, which are verified by the competent authority, this report and the contents of the attachments are willing to accept the decision of the competent authority as invalid.

#### **Verification Team**

Above opinion coincide with ARES verifier group with fairness and impartiality, and aim at the GHG emission from January 1, 2024 to December 31, 2024 of KAO HSING CHANG IRON & STEEL CORP.

ARES Lead Verifier :



Remarks: This verification opinion complies with the requirements of the ARES greenhouse gas verification service terms. The content of the opinion is prepared by ARES International Certification Co., Ltd. based on the verification results of greenhouse gas claims, and is issued after the customer's consent. This opinion is not used to relieve the client from the responsibility of complying with the articles of association, national or local laws, and any published international guidelines; the client and ARES are independent entities, and the client is not bound by ARES represent it against other organizations.

意見中須含完整的查證範圍、目標、標準和調查結果，否則意見無效。The opinion must contain the complete scope of verification, objectives, criteria and findings, otherwise the opinion is invalid.

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