



US00D943529S

(12) **United States Design Patent** (10) **Patent No.:** **US D943,529 S**
Carvalho et al. (45) **Date of Patent:** **** *Feb. 15, 2022**

(54) **TRANSFORMER**

(56) **References Cited**

(71) Applicant: **EFACEC ENERGIA—MÁQUINAS E EQUIPAMENTOS ELÉTRICOS S.A.**, S. Mamede de Infesta (PT)

U.S. PATENT DOCUMENTS

(72) Inventors: **Carlos Manuel Martins Carvalho, S.** Mamede de Infesta (PT); **Hélder Fernando Gonçalves Mendes, S.** Mamede de Infesta (PT); **Luís Miguel Ribeiro Félix, S.** Mamede de Infesta (PT); **Sérgio Manuel Oliveira Tavares, S.** Mamede de Infesta (PT)

1,535,261	A *	4/1925	Simmons	H01R 33/945 336/65
D100,529	S *	7/1936	Hunter	D13/124
D113,062	S *	1/1939	Garlick	D13/110
D149,364	S *	4/1948	Kern	D13/110
D180,448	S *	6/1957	Kerr	D13/110
D210,130	S *	2/1968	Stewart	D13/110
D259,040	S *	4/1981	Pierce	D13/110
4,280,063	A *	7/1981	Yokomori	G04F 1/005 307/141.4
D290,456	S *	6/1987	Burgher	D13/110
D339,323	S *	9/1993	Burgher	D13/110
D526,273	S *	8/2006	Le	D13/110

(73) Assignee: **EFACEC ENERGIA—MAQUINAS E EQUIPAMENTOS ELECTRICOS S.A.**, S. Mamede de Infesta (PT)

(Continued)

(*) Notice: This patent is subject to a terminal disclaimer.

Primary Examiner — Rhea Shields

(**) Term: **15 Years**

(74) *Attorney, Agent, or Firm* — Lucas & Mercanti, LLP

(21) Appl. No.: **35/508,603**

(57) **CLAIM**

(22) Filed: **Jul. 1, 2019**

The ornamental design for a transformer, as shown and described.

(80) **Hague Agreement Data**

Int. Filing Date: **Jul. 1, 2019**
Int. Reg. No.: **DM/205718**
Int. Reg. Date: **Jul. 1, 2019**
Int. Reg. Pub. Date: **Feb. 14, 2020**

DESCRIPTION

(51) **LOC (13) Cl.** **13-02**

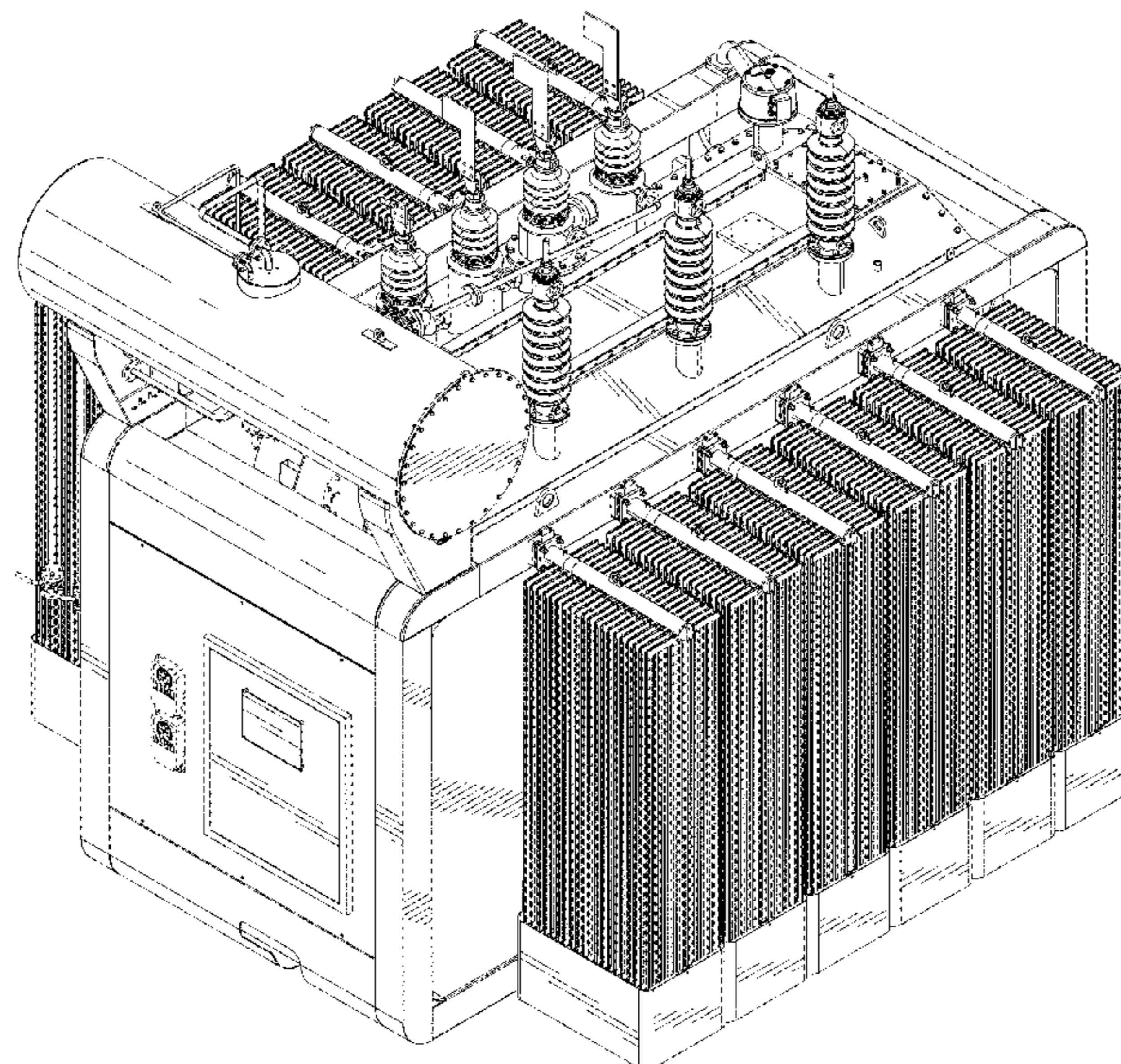
(52) **U.S. Cl.**
USPC **D13/110**

(58) **Field of Classification Search**
USPC D13/110, 124, 122
CPC G04F 1/005; H01R 33/945; H01F 27/02;
H01F 41/02; H01C 7/12; H01H 33/6606
See application file for complete search history.

- 1. Transformer
- 1.1 : Front
- 1.2 : Back
- 1.3 : Bottom
- 1.4 : Left
- 1.5 : Lower perspective view
- 1.6 : Perspective
- 1.7 : Right
- 1.8 : Top

In the reproductions, the broken lines are for the purpose of illustrating portions of the transformer that forms no part of the claimed design.

1 Claim, 8 Drawing Sheets



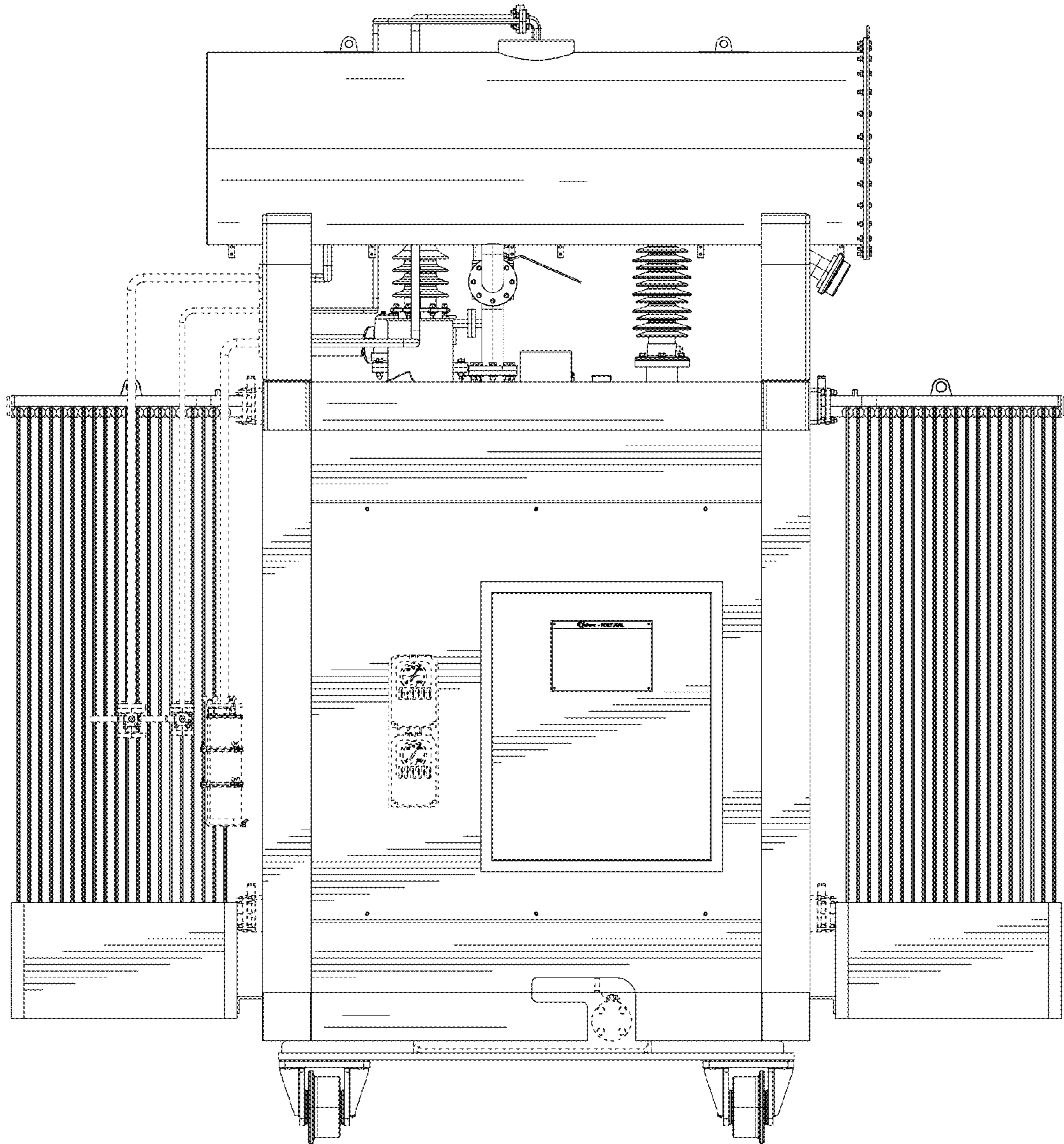
(56)

References Cited

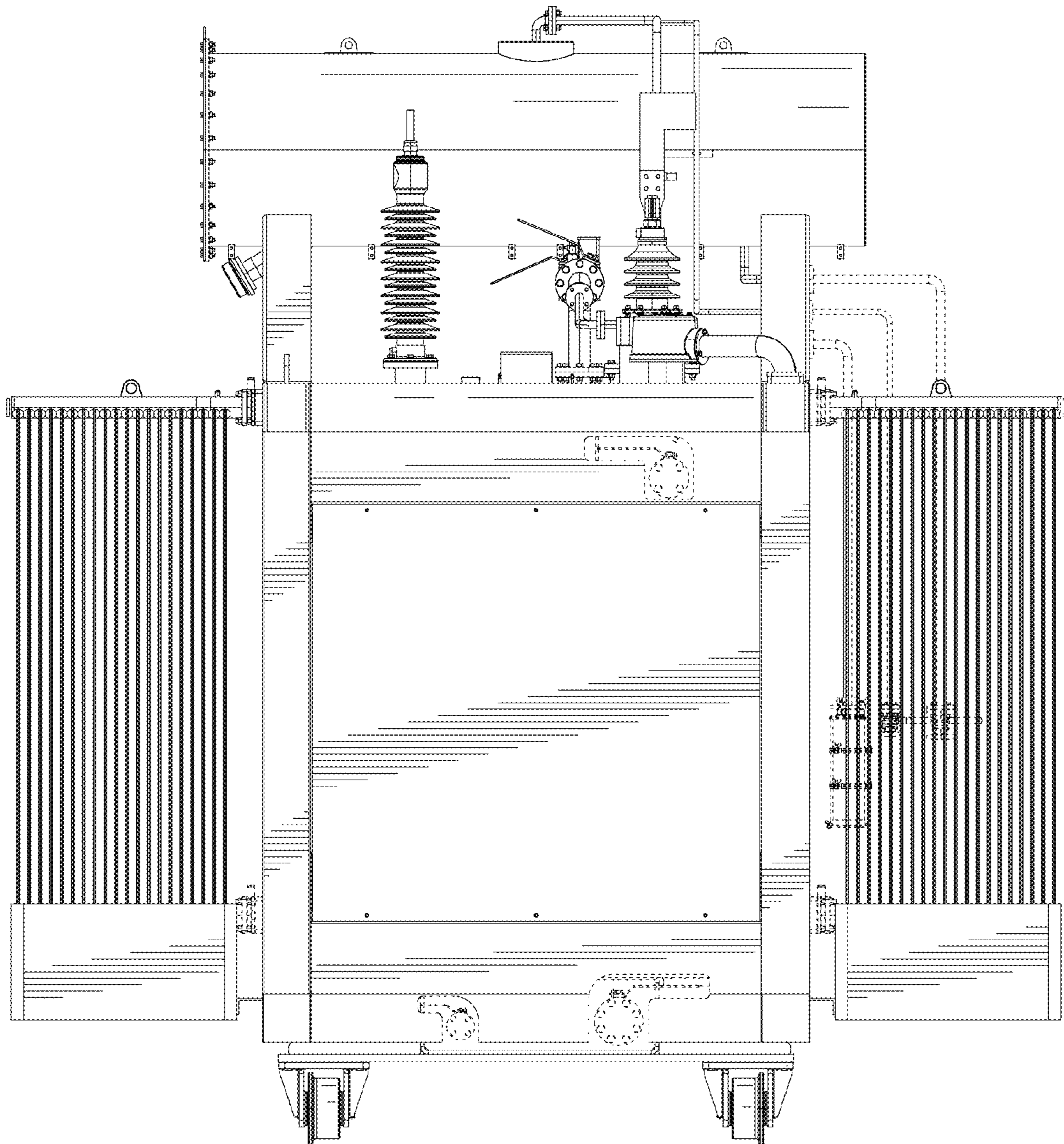
U.S. PATENT DOCUMENTS

D595,226 S * 6/2009 Jidaisho D13/110
D638,795 S * 5/2011 Bechtel D13/122
8,278,582 B2 * 10/2012 Tu H01H 33/6606
218/118
D727,262 S * 4/2015 Omote D13/110
9,793,701 B2 * 10/2017 Springborn H01C 7/12
D813,809 S * 3/2018 Beer D13/110
D821,311 S * 6/2018 Beer D13/110
D821,312 S * 6/2018 Beer D13/110
D836,550 S * 12/2018 Beer D13/110
D865,669 S * 11/2019 Beer D13/110
D867,988 S * 11/2019 Moreno D13/110
D904,298 S * 12/2020 Manhart D13/110
2003/0006334 A1 * 1/2003 Hoffmann H01F 41/02
242/437
2015/0109087 A1 * 4/2015 Golner H01F 27/324
336/198
2020/0251269 A1 * 8/2020 Gon Alves Mendes
H01F 27/02

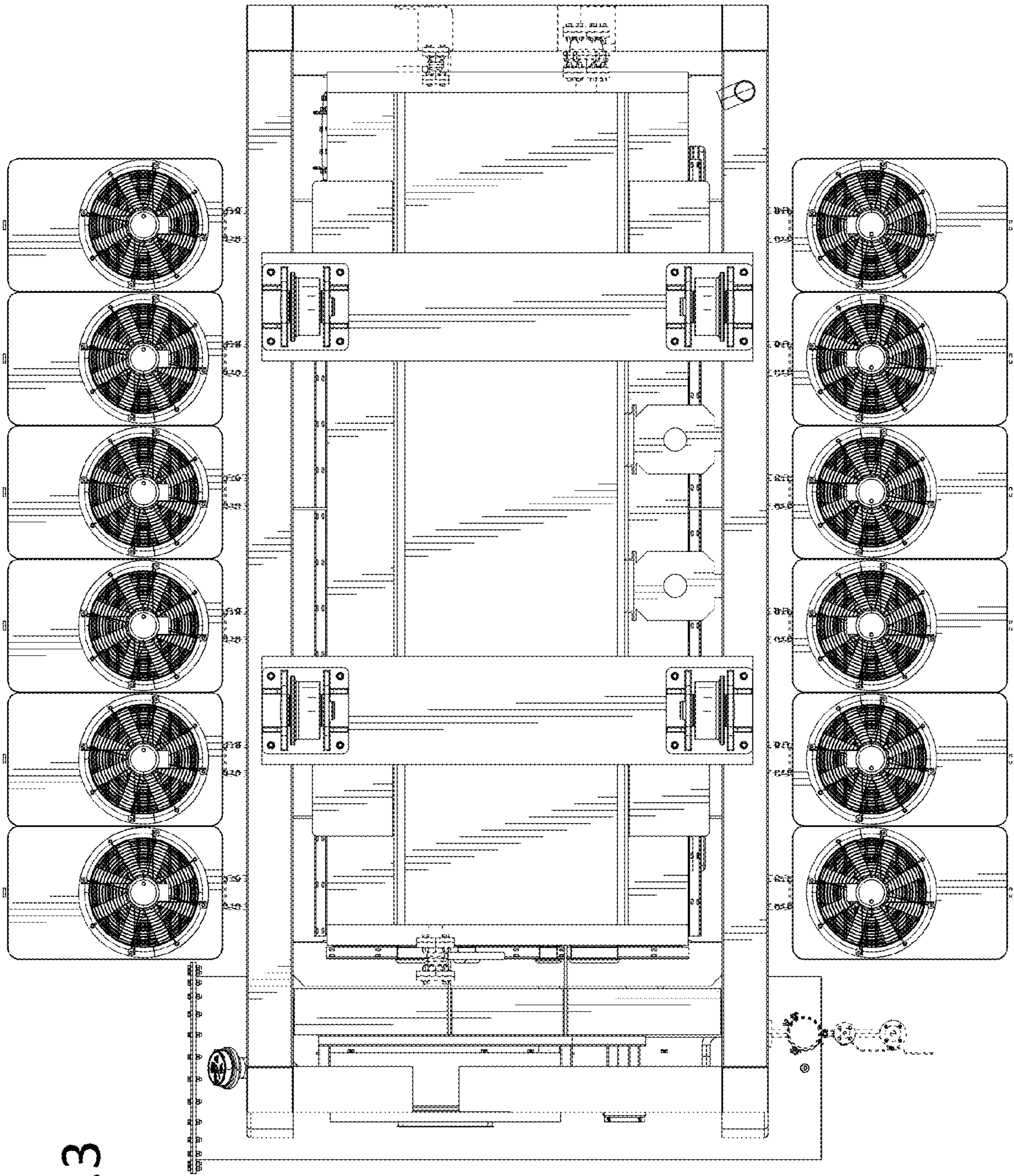
* cited by examiner



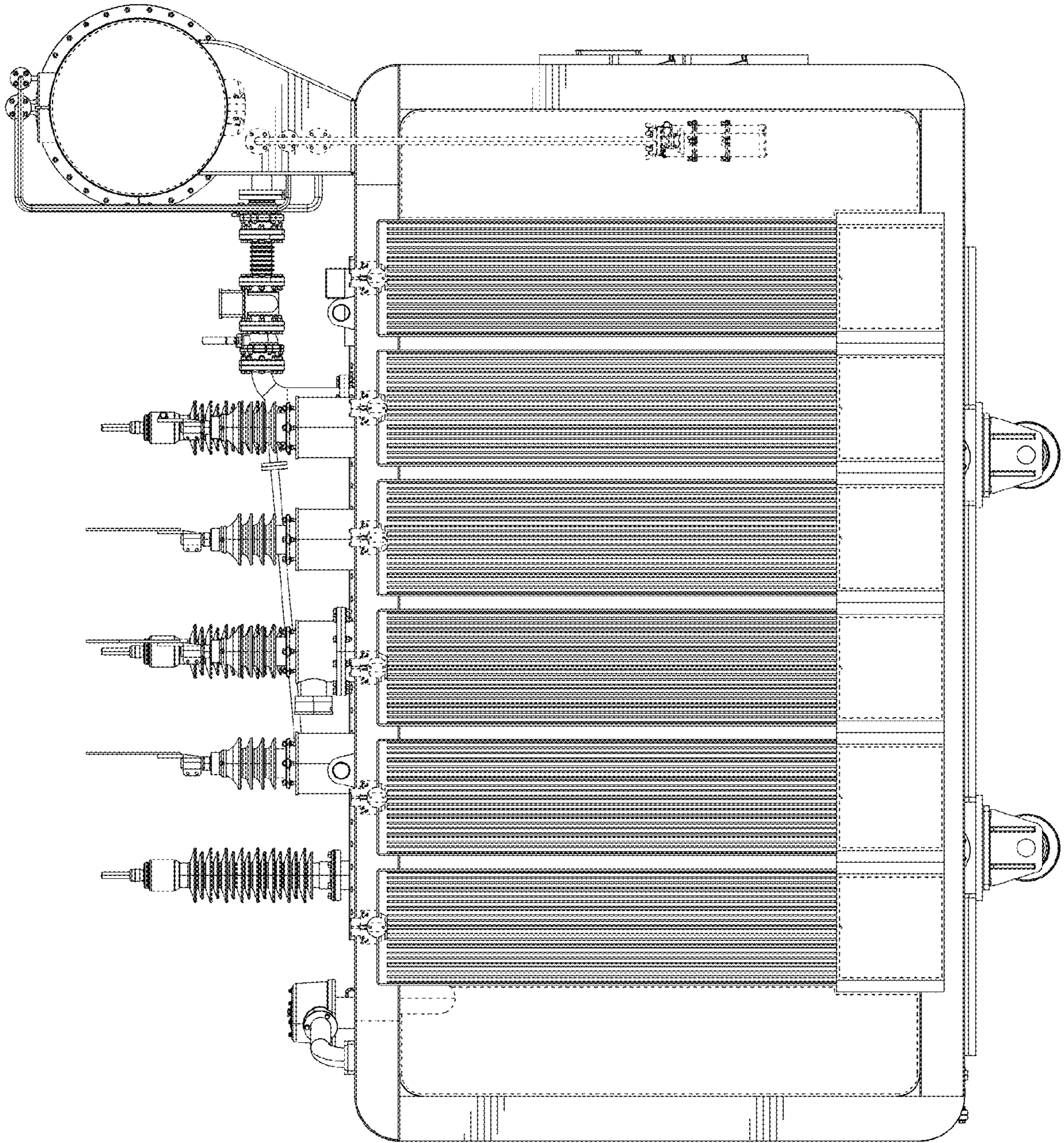
1.1



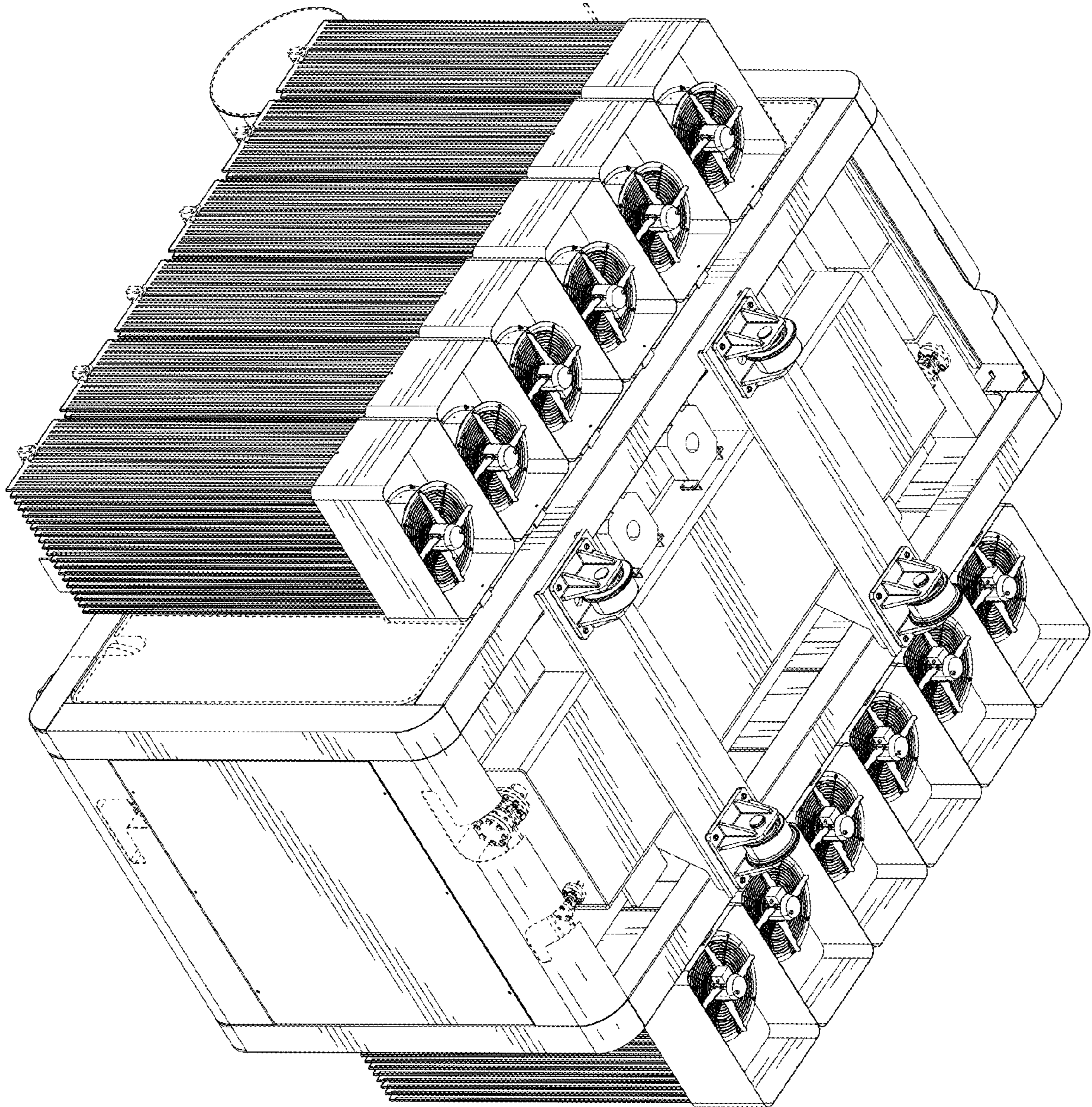
1.2



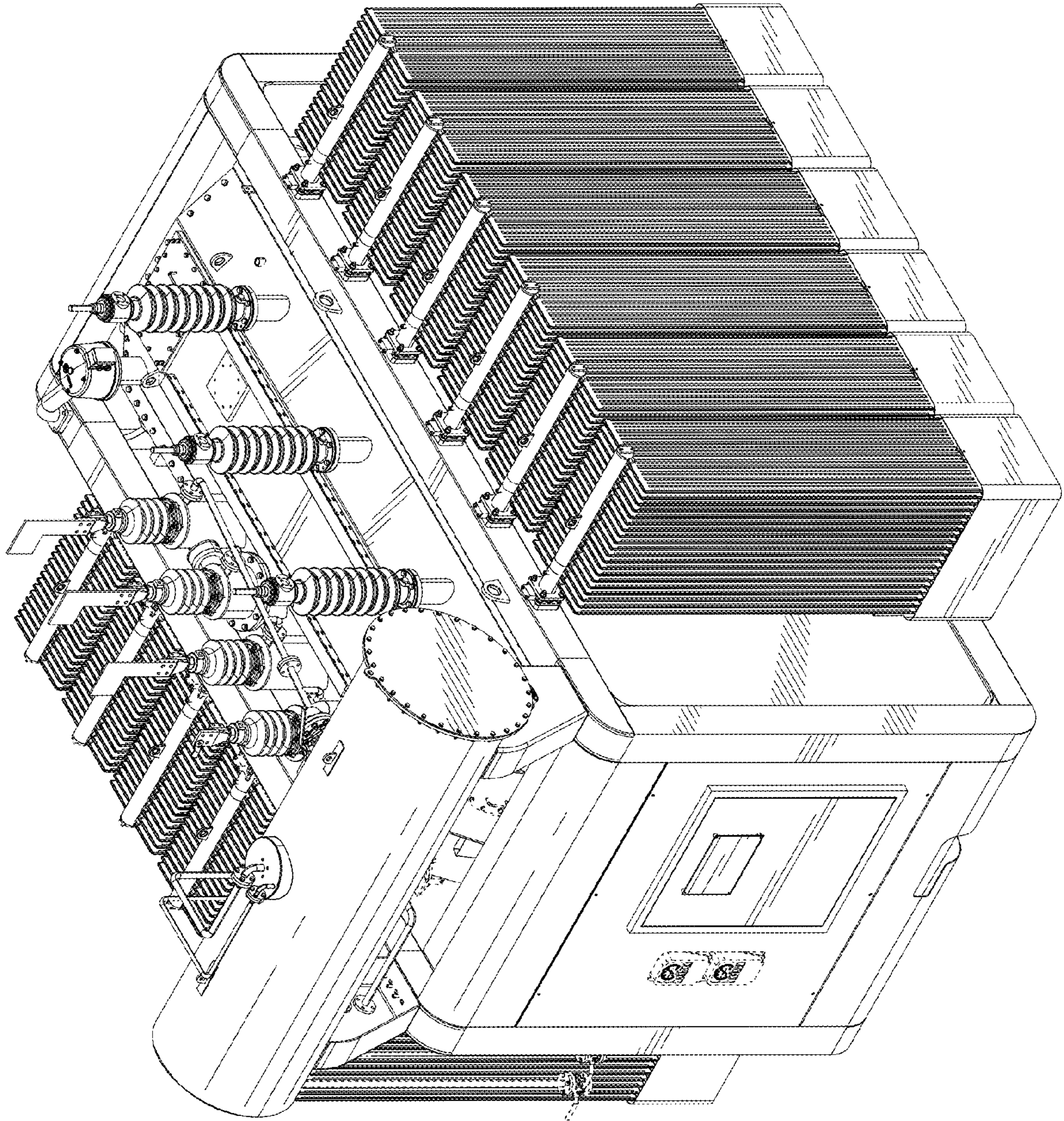
1.3



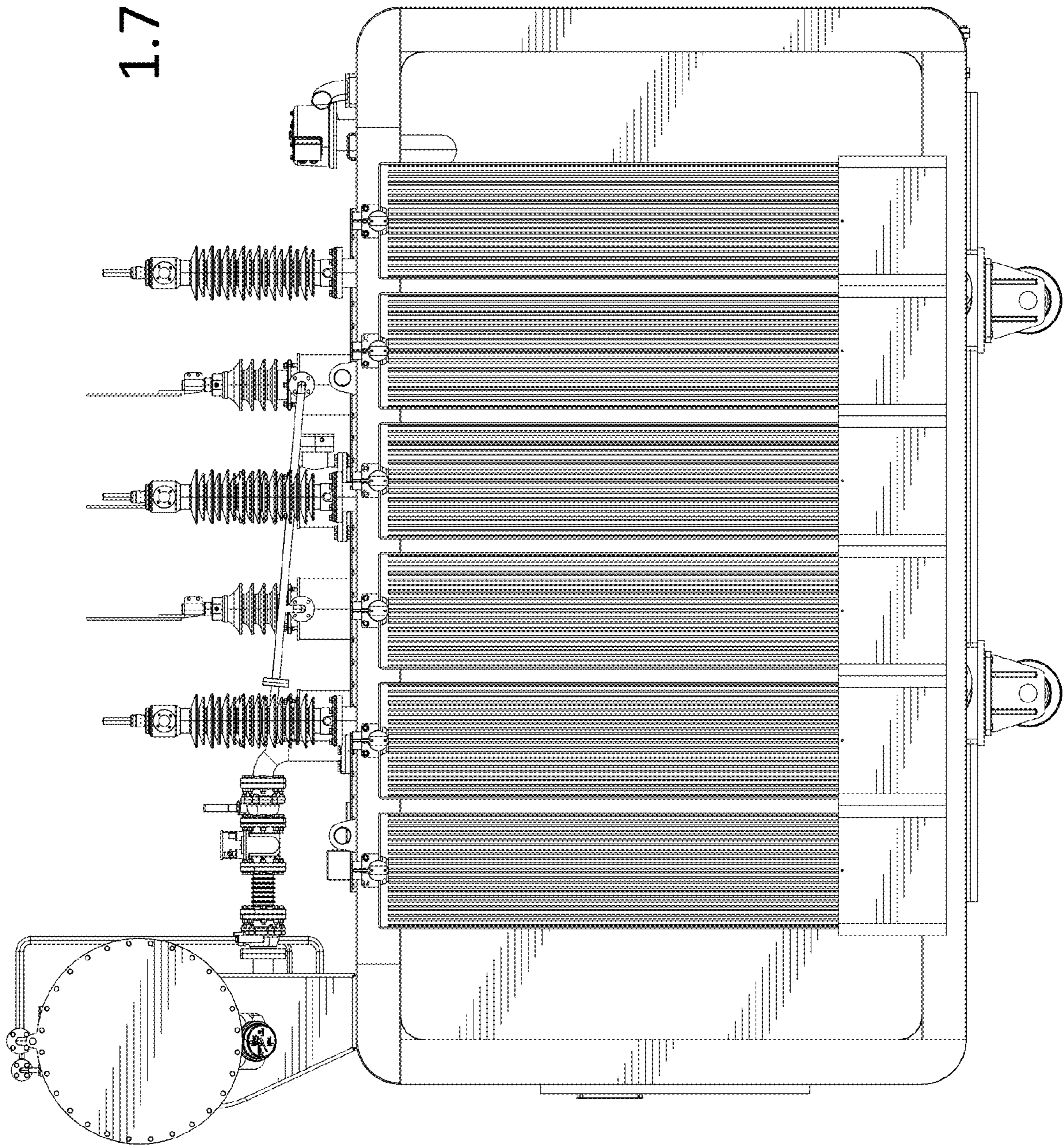
1.4

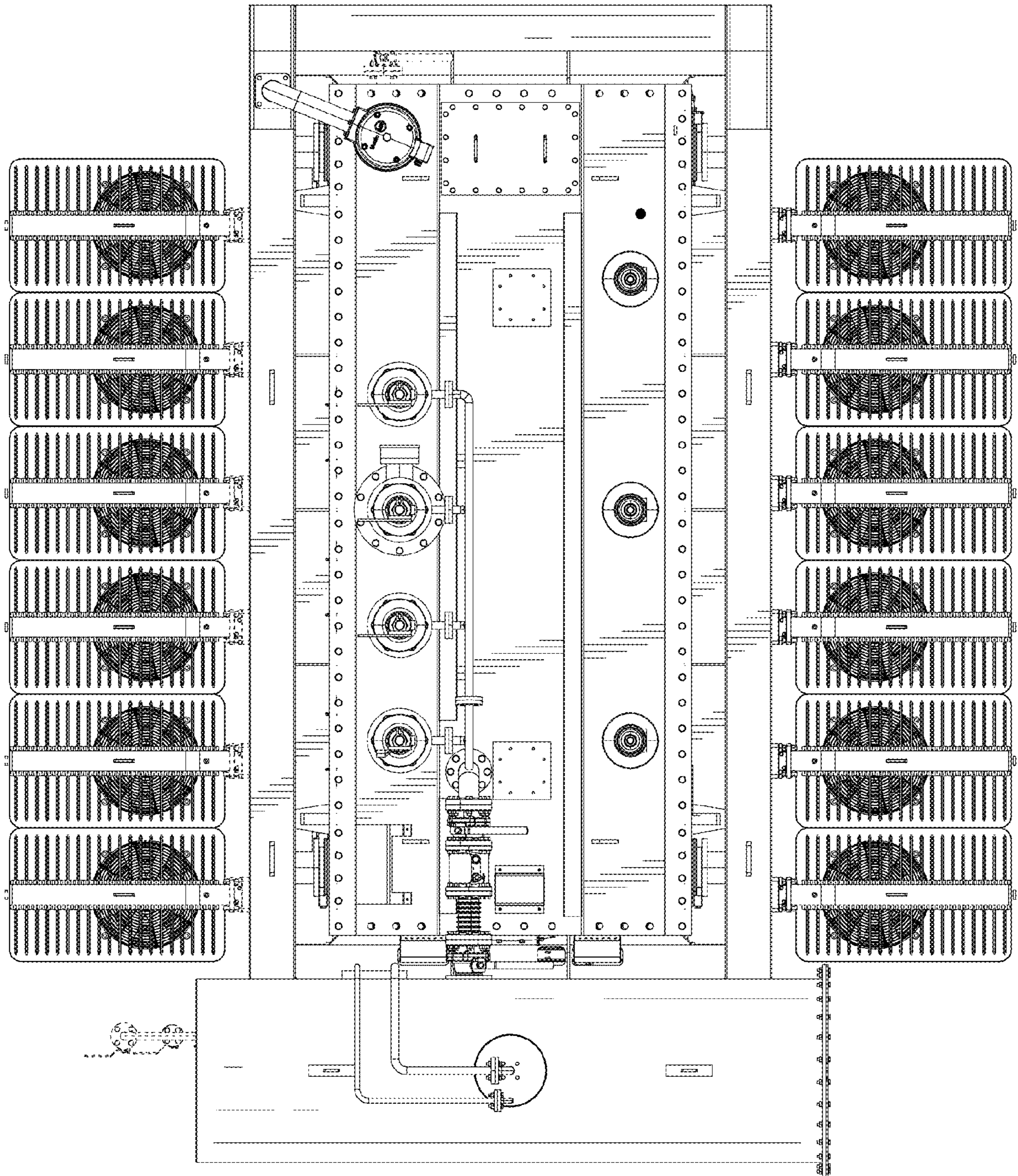


1.5



1.6





1.8