

US00D962882S

(12) **United States Design Patent** (10) **Patent No.:** **US D962,882 S**  
**Tomori** (45) **Date of Patent:** **\*\* \*Sep. 6, 2022**

(54) **TEMPORARY PROTECTIVE FILM FOR MANUFACTURING SEMICONDUCTOR DEVICES**

(71) Applicant: **SHOWA DENKO MATERIALS CO., LTD.**, Tokyo (JP)

(72) Inventor: **Naoki Tomori**, Tokyo (JP)

(73) Assignee: **SHOWA DENKO MATERIALS CO., LTD.**, Tokyo (JP)

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

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

(21) Appl. No.: **35/510,733**

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Nov. 14, 2019 (JP) ..... 2019-025330

(51) **LOC (13) Cl.** ..... **13-99**

(52) **U.S. Cl.**  
USPC ..... **D13/199**

(58) **Field of Classification Search**  
USPC ..... D13/182, 180; D19/69, 67; D24/189  
(Continued)

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*Primary Examiner* — Rhea Shields

(74) *Attorney, Agent, or Firm* — Fitch, Even, Tabin & Flannery, LLP

(57) **CLAIM**

The ornamental design for a temporary protective film for manufacturing semiconductor devices, as shown and described.

**DESCRIPTION**

FIG. 1.1 is a perspective view of a temporary protective film for manufacturing semiconductor devices showing my design;

FIG. 1.2 is a front view thereof;

FIG. 1.3 is a back view thereof;

FIG. 1.4 is a top view thereof;

FIG. 1.5 is a bottom view thereof;

FIG. 1.6 is a left side view thereof;

FIG. 1.7 is a right side view thereof;

FIG. 1.8 is a vertical cross-sectional view passing through the center of FIG. 1.6.

FIG. 3.1 is a perspective view of a temporary protective film for manufacturing semiconductor devices showing my design;

FIG. 3.2 is a front view thereof;

FIG. 3.3 is a back view thereof;

FIG. 3.4 is a top view thereof;

FIG. 3.5 is a bottom view thereof;

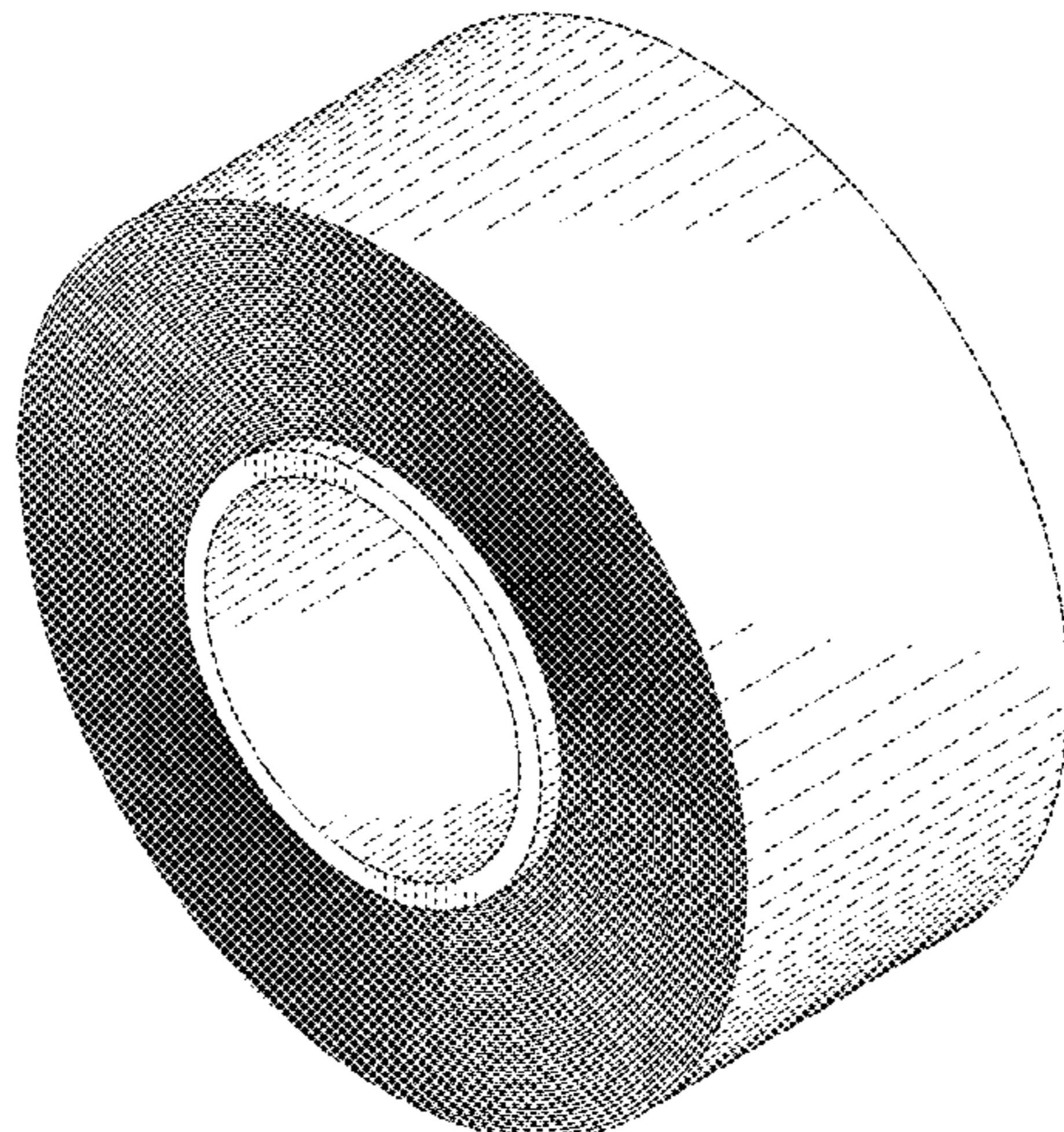
FIG. 3.6 is a left side view thereof;

FIG. 3.7 is a right side view thereof;

FIG. 3.8 is a vertical cross-sectional view passing through the center of FIG. 3.6.

Each article includes a core part and a film part, and is characterized by the fact that the width of the core part is larger than the width of the film part, and the core part protrudes greatly to one side; each article is temporarily

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attached to a back of a lead frame when manufacturing a semiconductor device with only one side encapsulated and the lead frame on the back side exposed; the film part of each article has an adhesive layer on one side; each article is easy to position when set on a manufacturing equipment. The parallel thin lines in the representation represent contours only and do not illustrate an ornamentation or decoration on the surface of the product.

**1 Claim, 16 Drawing Sheets**

(58) **Field of Classification Search**

CPC ..... B65H 35/0033; B65H 35/0026; B65H 35/008; A61F 15/002; B42F 21/00; B65D 85/672; G11C 11/06; H05K 7/209; C09J 7/385; C09J 133/068

See application file for complete search history.

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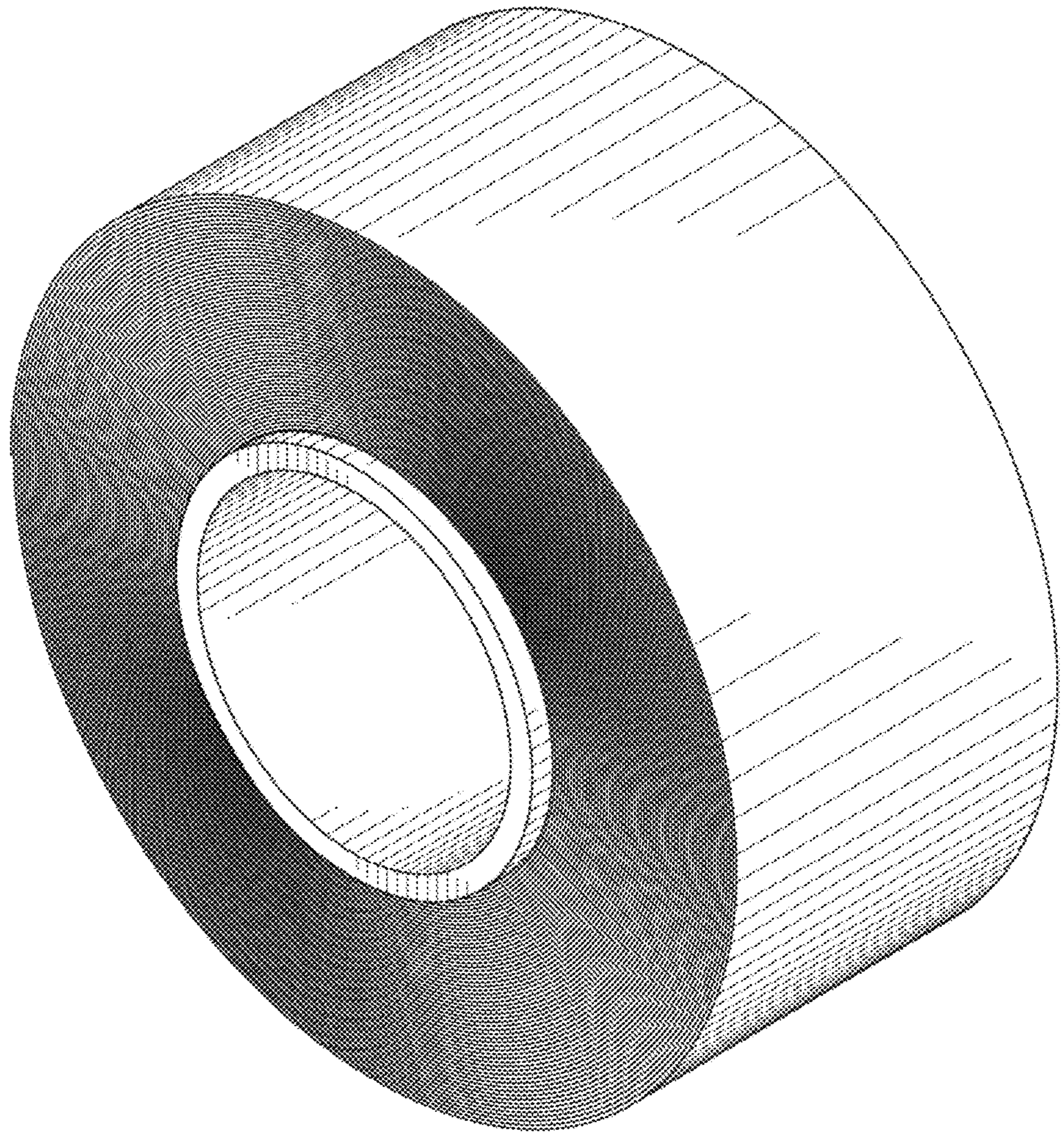
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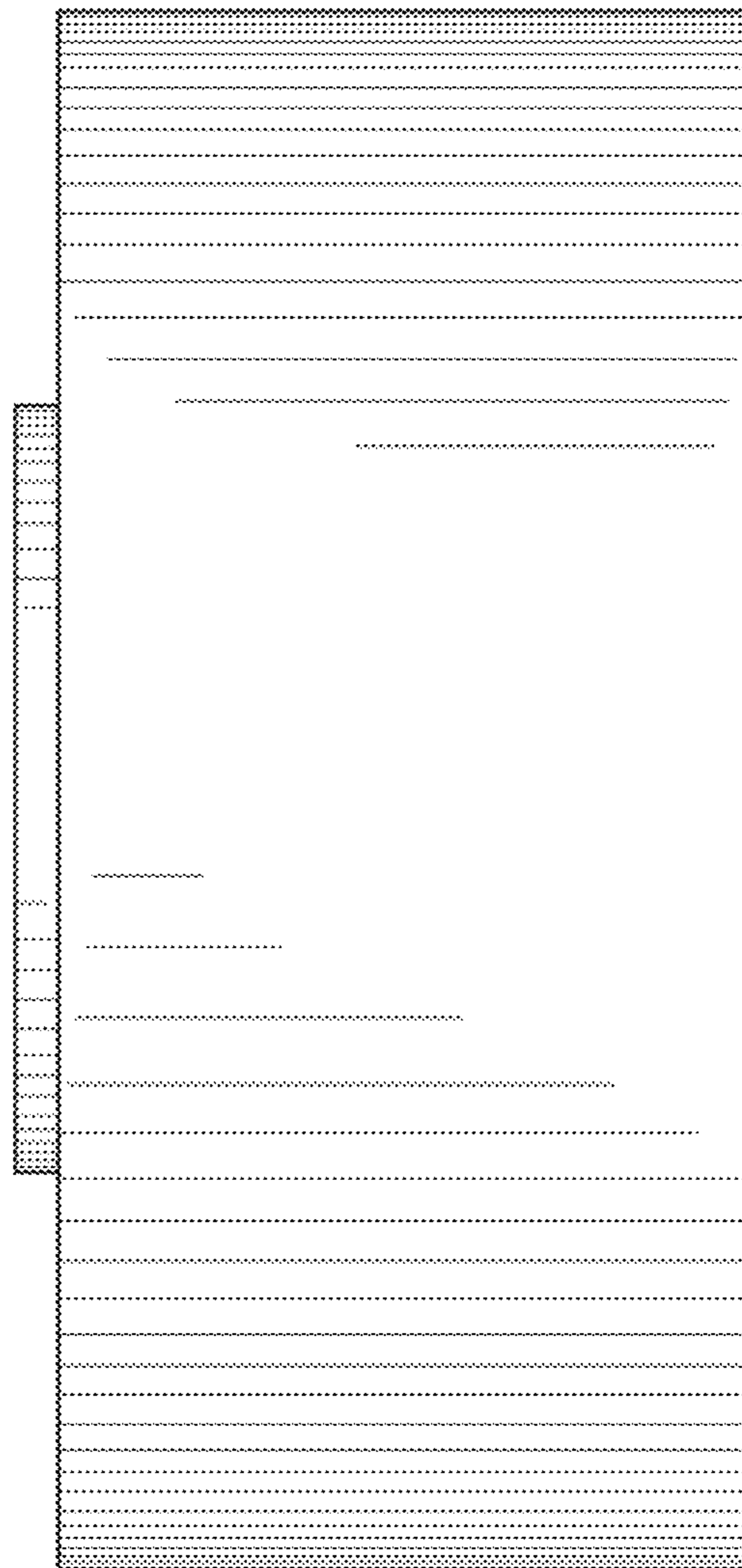
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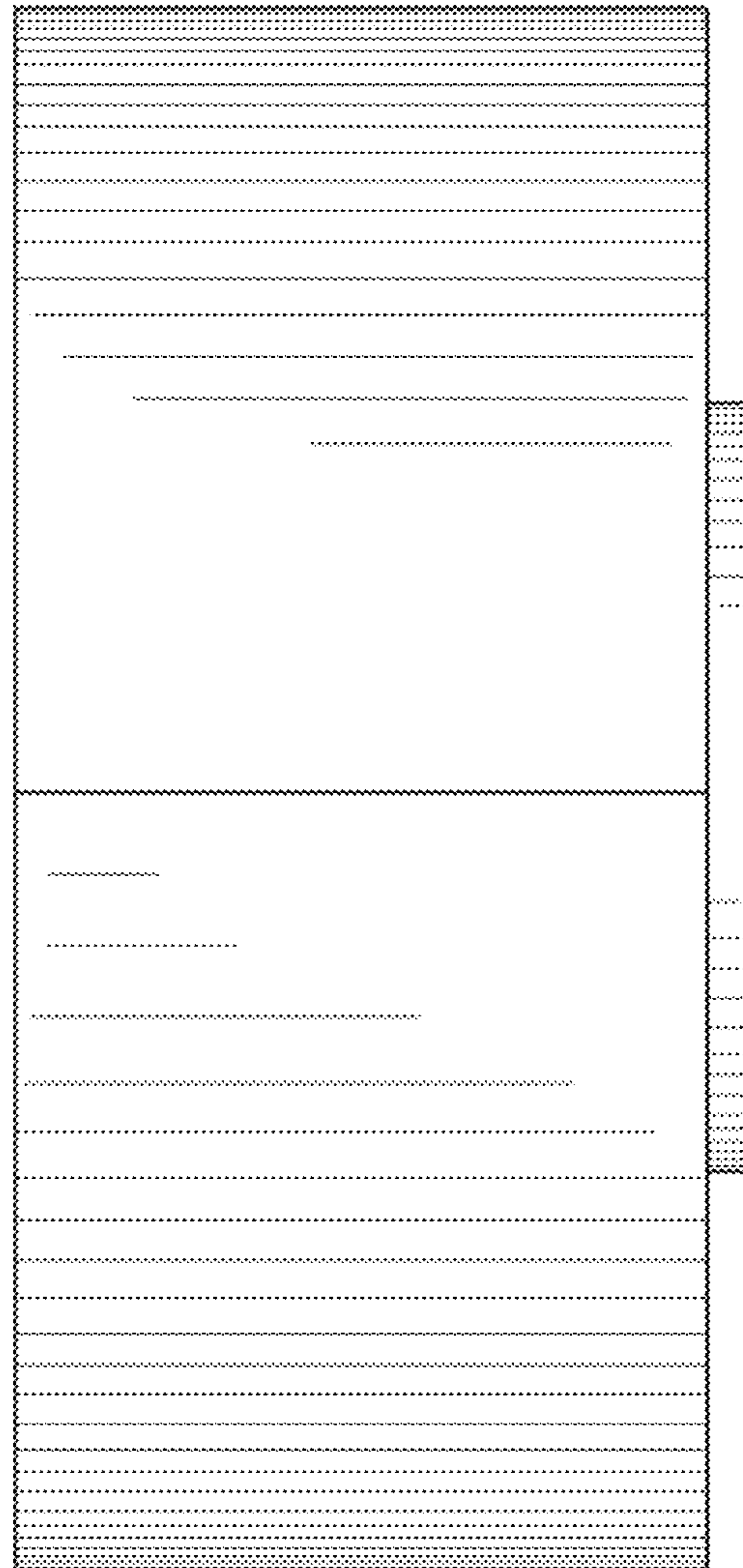
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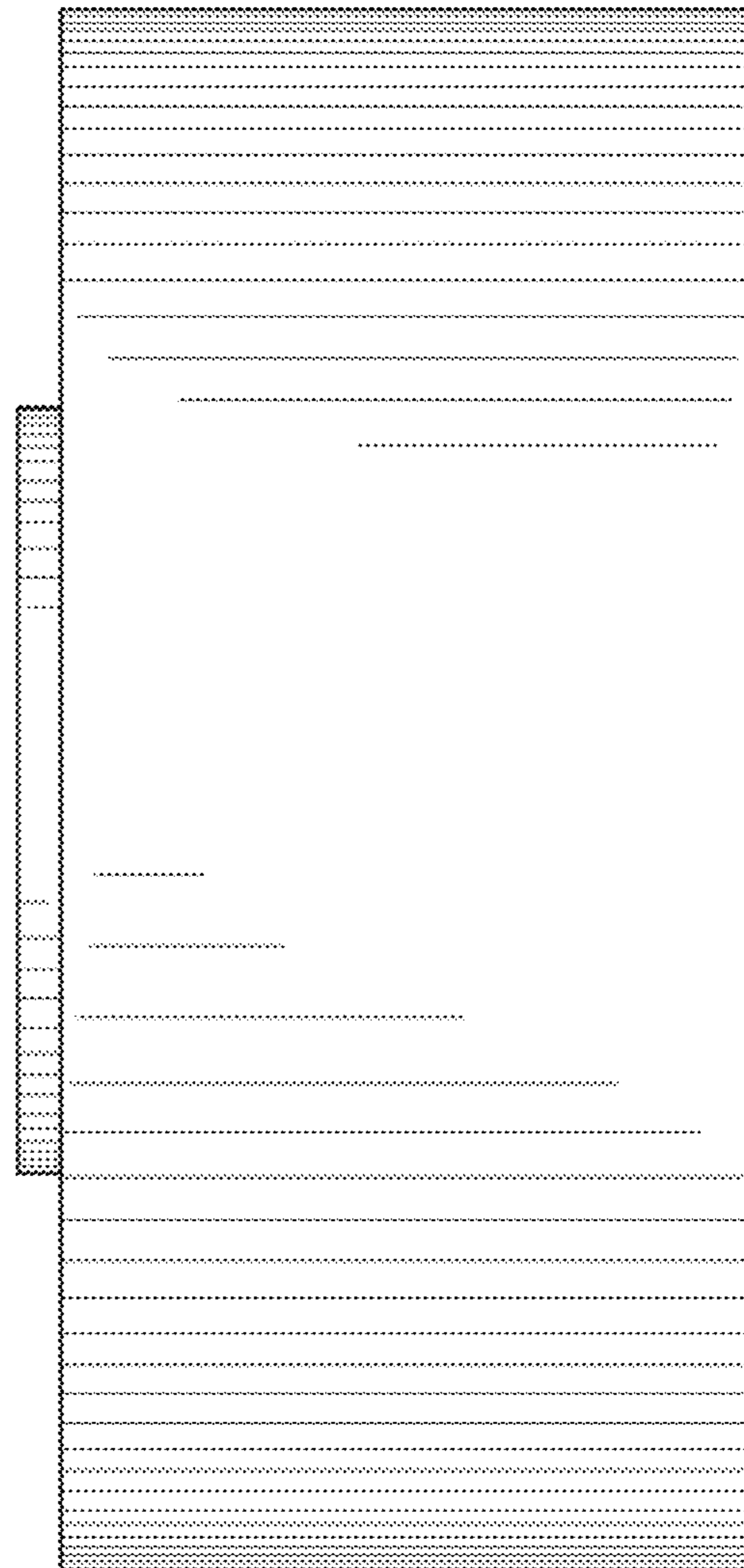
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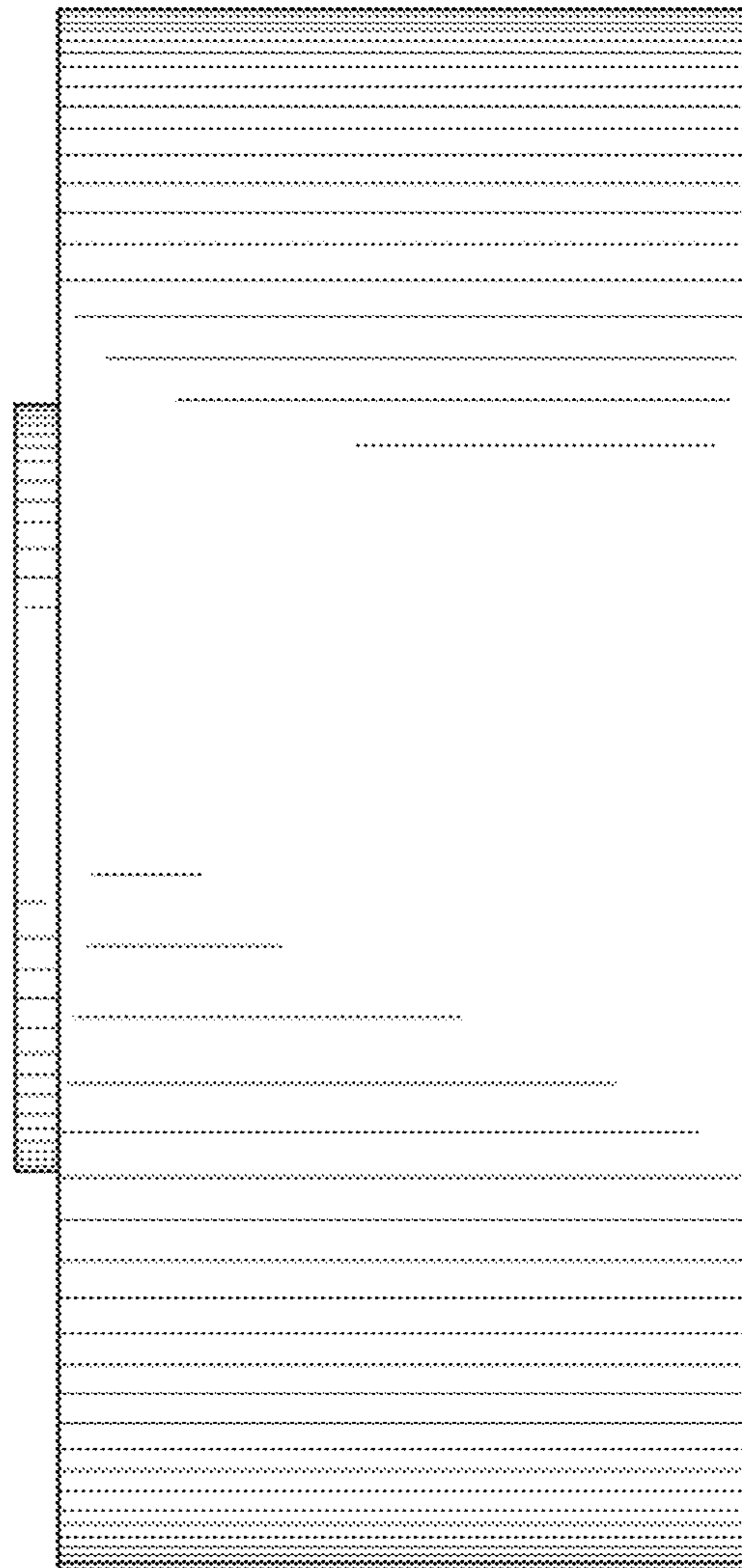
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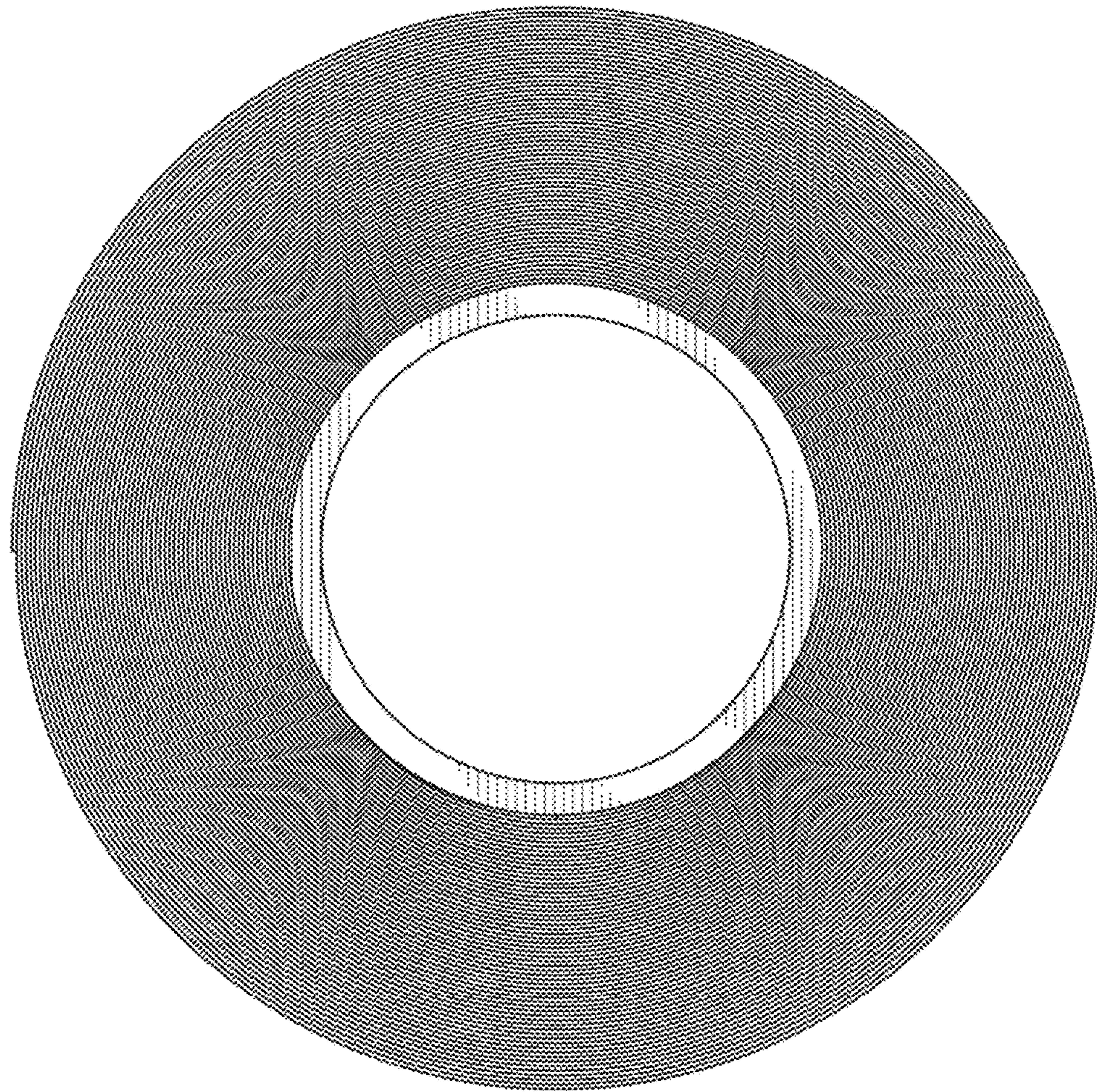
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1.5

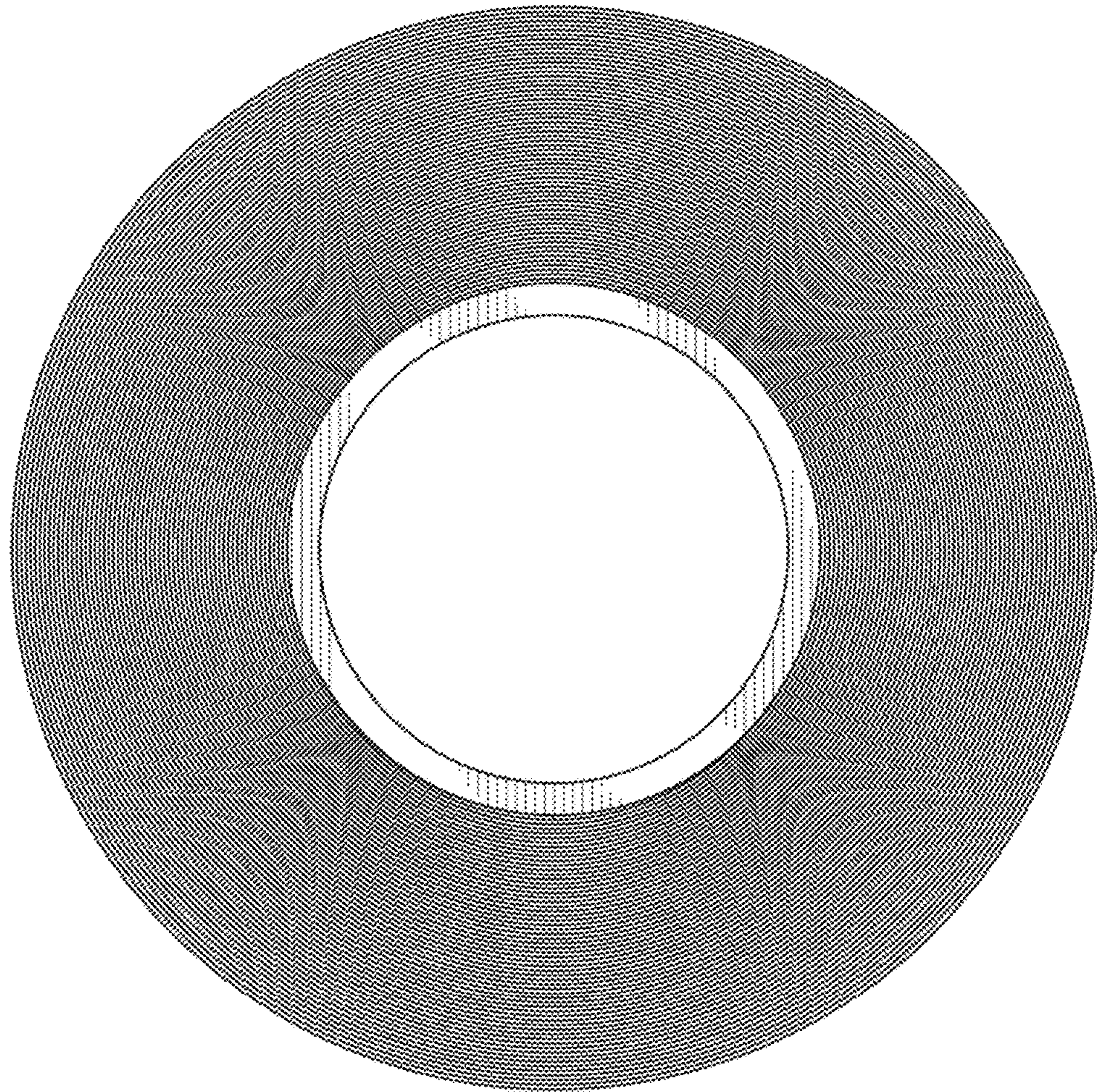


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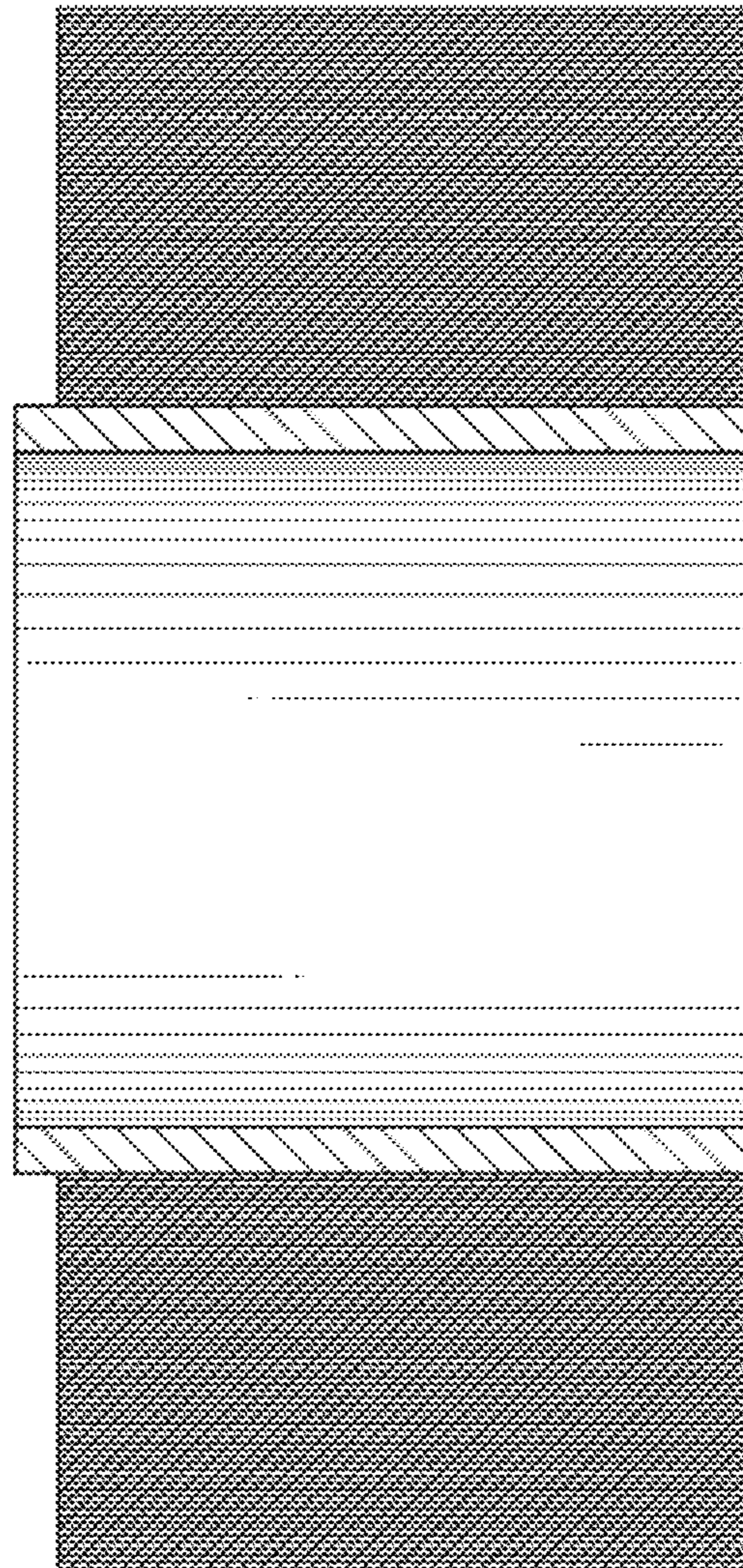




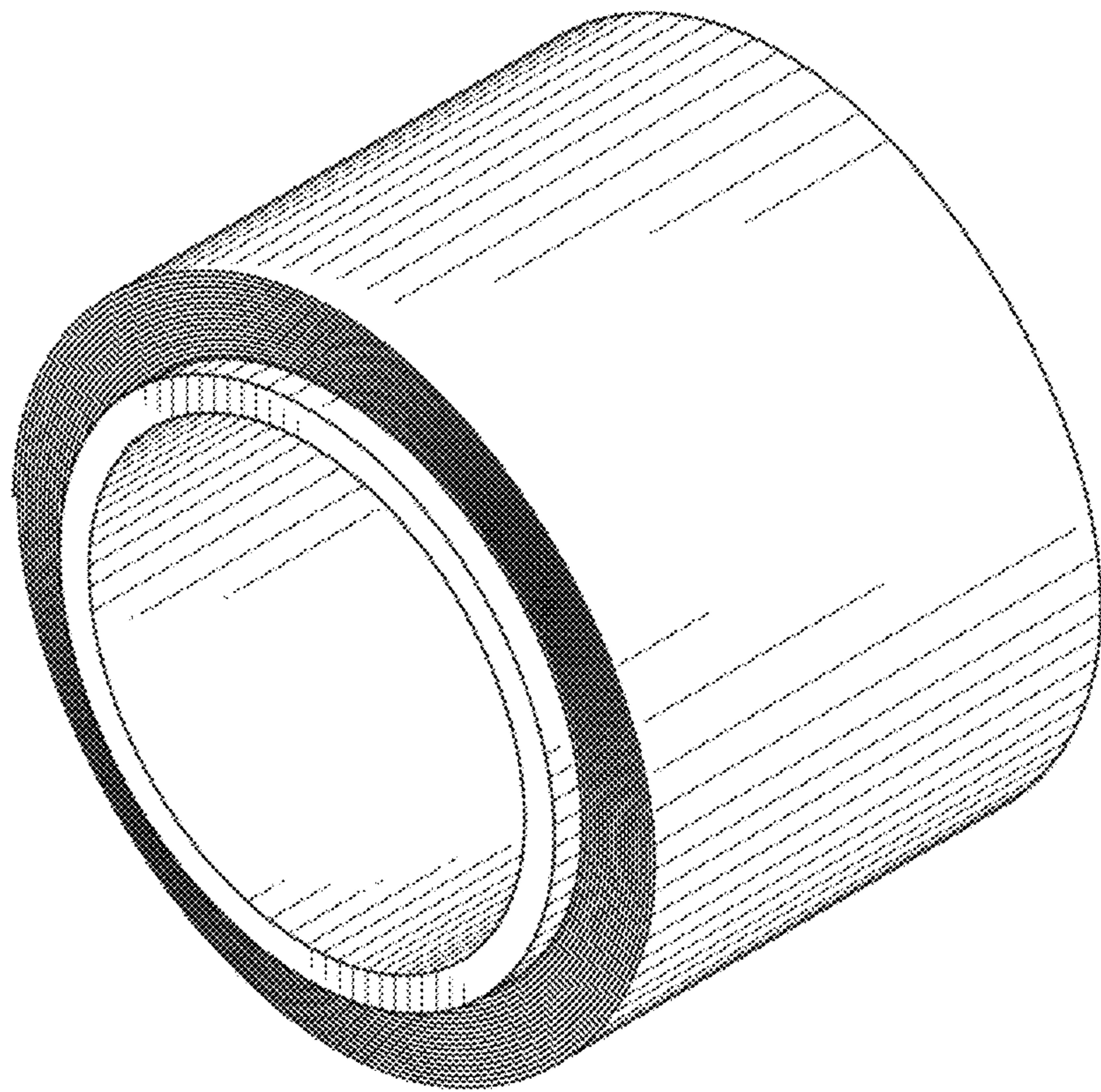
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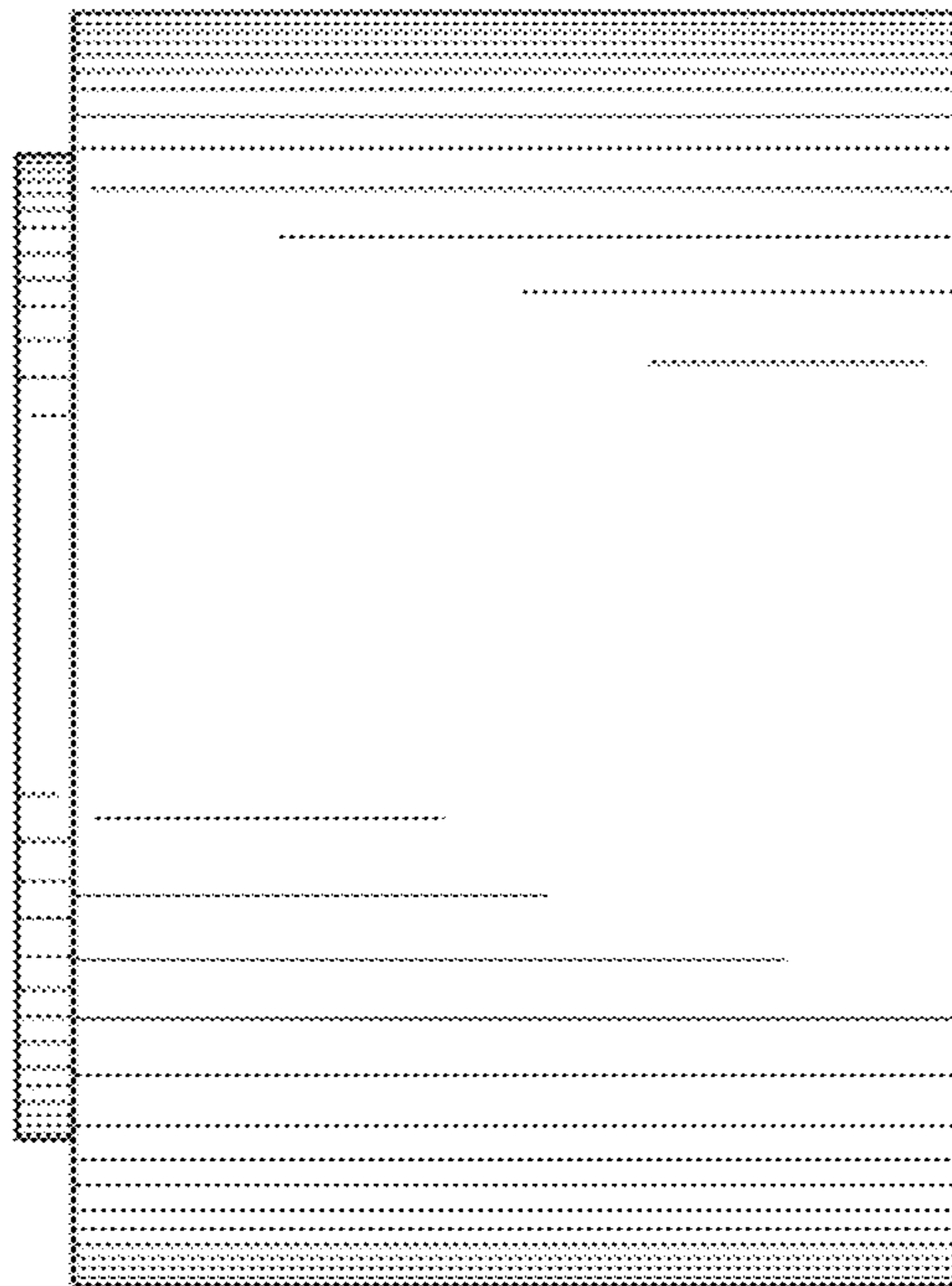
1.8



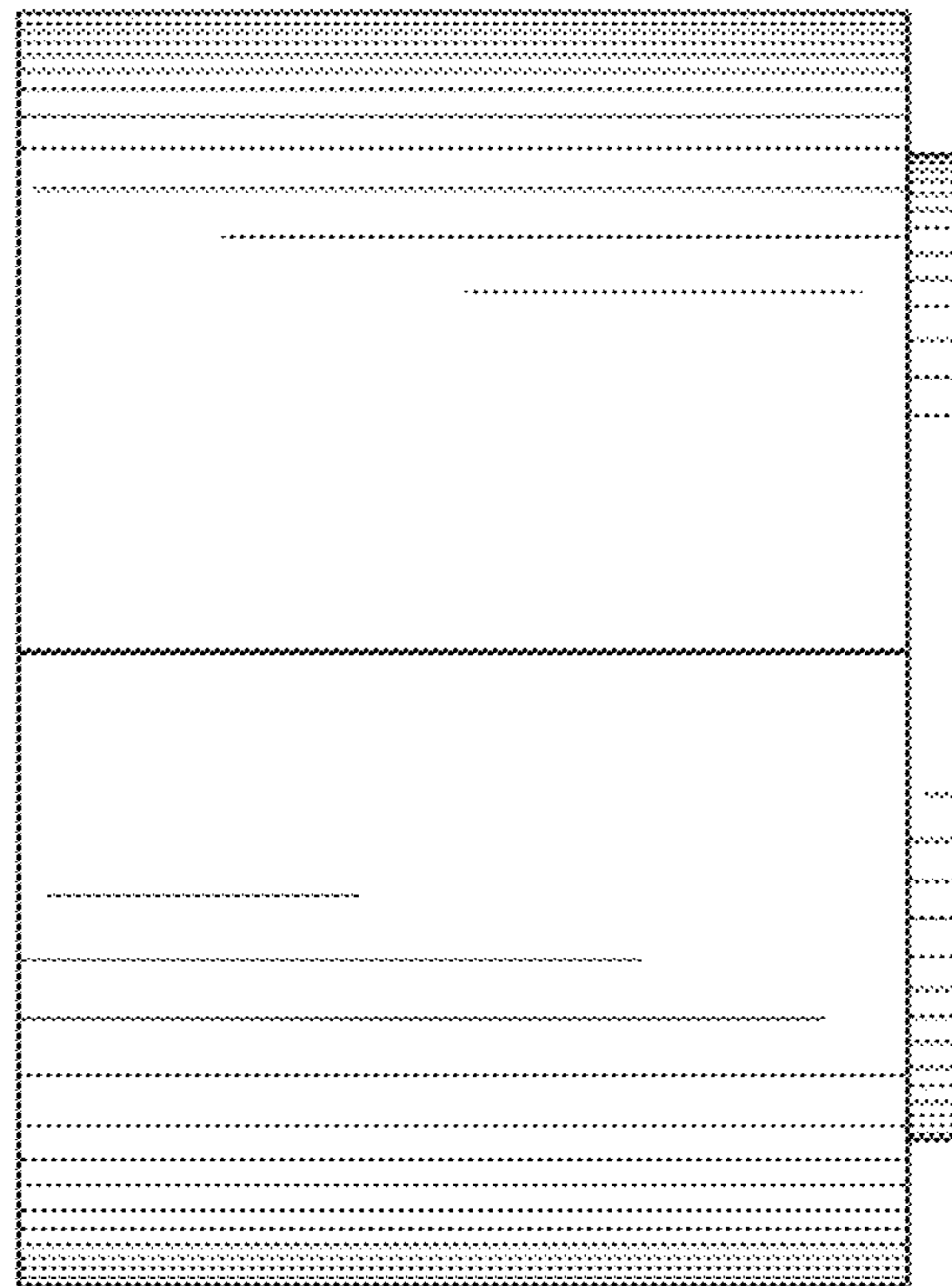
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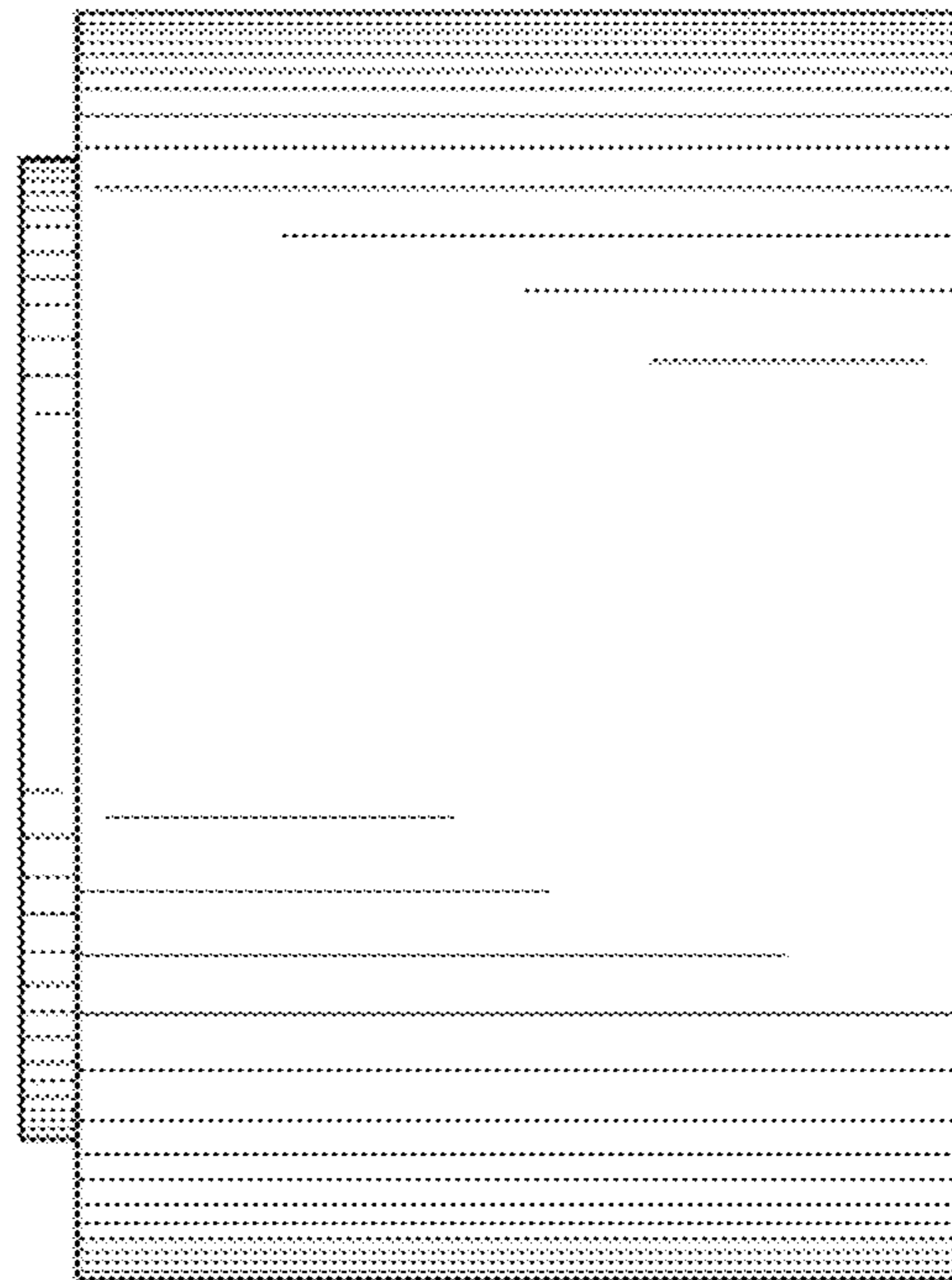
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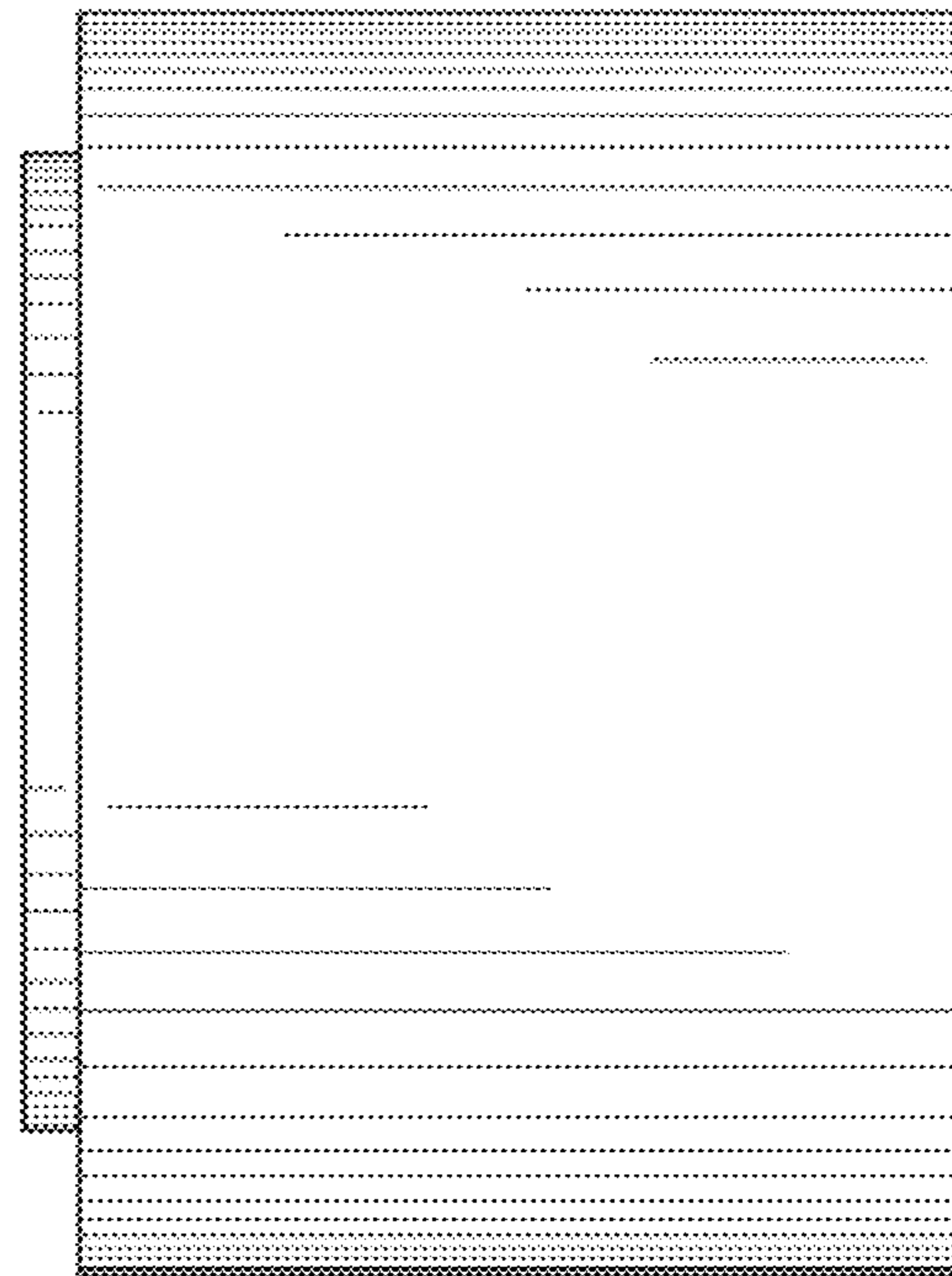
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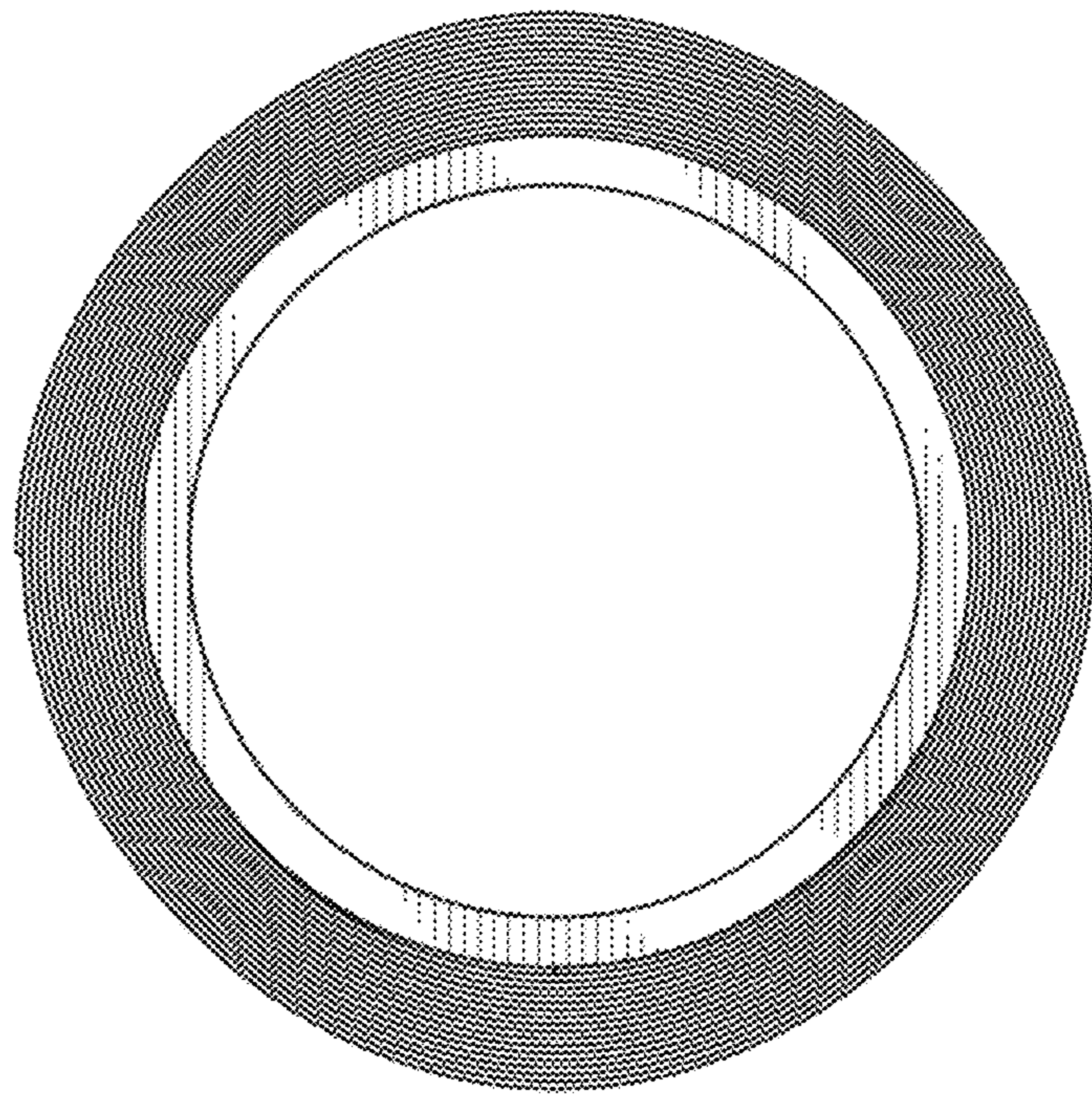
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3.5

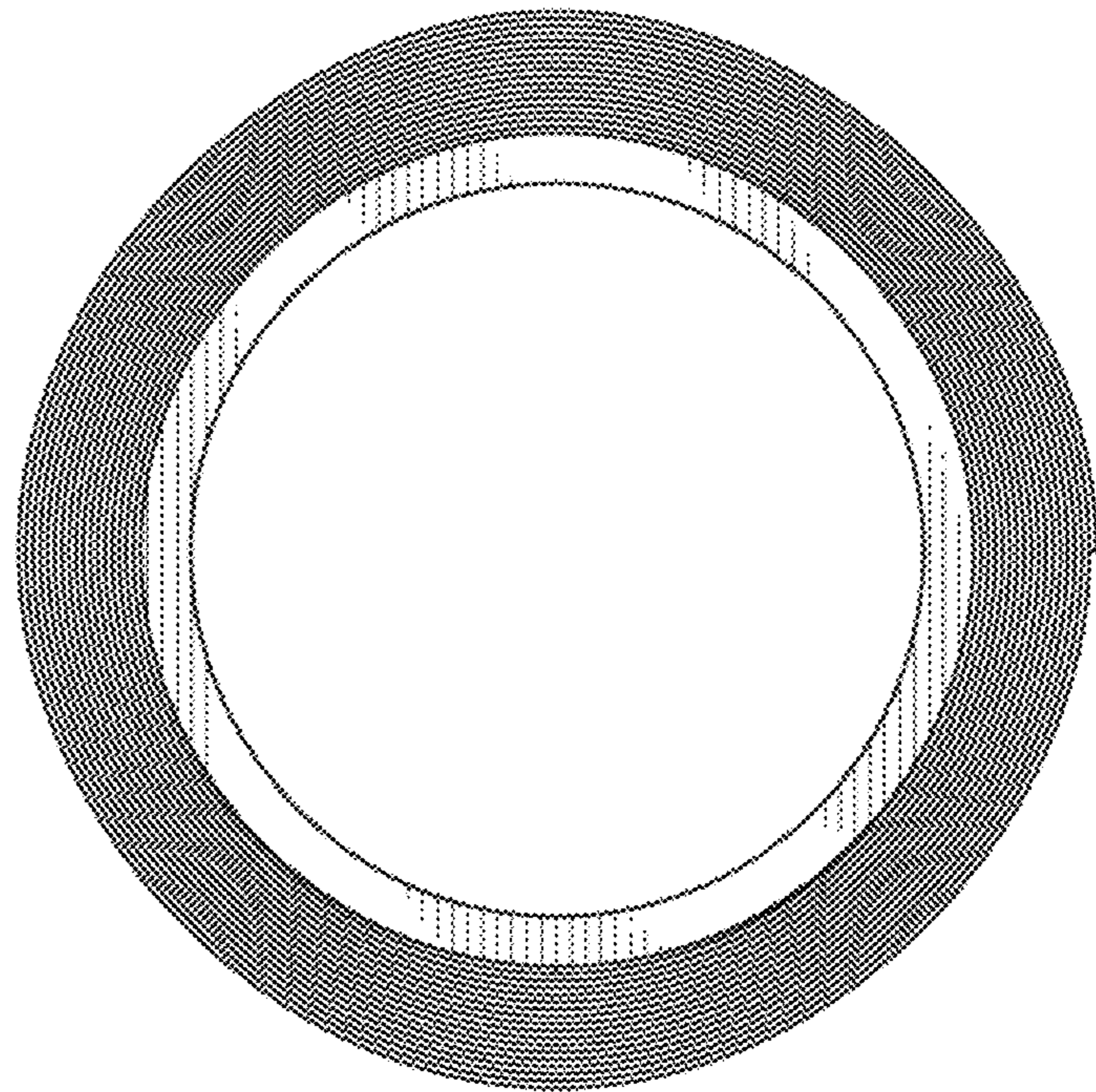


3.6





3.7



3.8

