

# PROPELLER VISUAL TECHNICAL INSPECTION REPORT

**TYPE OF INSPECTION:**

PRE-REPAIR  POST REPAIR/NEW MANUFACTURE  IN-SERVICE  PRESERVATION DAMAGE

**IDENTIFICATION DATA (STAMPED ON HUB/PALM)**

SERIAL NO.	SHIP CLASS	STOCK NO. (NSN)
DRAWING NO.		DRAWING REVISION: HUB/PALM _____ DWG _____
MATERIAL		WEIGHT
PORT <input type="checkbox"/> STBD <input type="checkbox"/> INBD <input type="checkbox"/> OUTBD <input type="checkbox"/> CENTER <input type="checkbox"/>		
MONOBLOC <input type="checkbox"/> CPP <input type="checkbox"/> CAP/DEVICE <input type="checkbox"/>		NO. OF BLADES
RH <input type="checkbox"/> LH <input type="checkbox"/>		

**INSPECTION**

INSPECTING ACTIVITY	LOCATION OF INSPECTION (ACTIVITY)
PROPELLER IS INSTALLED? YES <input type="checkbox"/> NO <input type="checkbox"/>	SHIP (INCLUDE HULL NUMBER - IF APPLICABLE)
PT AIDED VISUAL INSPECTION? YES <input type="checkbox"/> NO <input type="checkbox"/>	UNDERWATER VISUAL INSPECTION? YES <input type="checkbox"/> NO <input type="checkbox"/>
PRINTED NAME AND TITLE OF QUALIFIED INSPECTOR	TELEPHONE NUMBER
SIGNATURE OF INSPECTOR	DATE OF INSPECTION
PRINTED NAME OF REVIEWER (SEE NOTE 6)	TELEPHONE NUMBER
SIGNATURE OF REVIEWER (SEE NOTE 6)	DATE

**INSTRUCTIONS**

1. Use this form by placing a check mark in the appropriate column -- YES, NO, or NA (not applicable).
2. Answer all questions. Use additional comments block if more space is needed.
3. If an answer indicates the possibility of an unsatisfactory propeller, explain in the REMARKS column.
4. Show the approximate size and location of all defects and damage on the appropriate sketch.
5. Identify damaged areas as old or new, if possible.
6. Government verification in contractor facility. Independent reviewer in government facility. Signature must be on all distribution copies.

**DISTRIBUTION:**

One copy to NSWC Philadelphia Division Code 426 for Submarine Propellers or Code 427 for Surface Ship Propellers, Contracting Officer, & File

Other:

ITEM		YES	NO	NA	REMARKS
<b>1.0</b>	<b>Preservation and Storage</b>				
1.1	Is the propeller stored in open covered storage or better?				
1.2	Is the propeller stored on blocks or skids?				
1.3	Are the results of any unsatisfactory visual preservation inspections attached? (If no, provide reason in remarks, otherwise note as N/A)				
1.3.1	Has any repaired preservation damage been tagged for future reference?				
<b>2.0</b>	<b>Monobloc Propeller Accessories</b>				
2.1	Are the following accessories installed or accompanying this propeller?				
2.1.1	Gland ring				
2.1.2	Eyebolts				
2.1.3	Eyebolt hole plugs				
2.1.4	Fill and vent hole plugs				
2.1.5	Gland/Cap studs and nuts				
2.2	Are installed eyebolt hole and fill and vent hole plugs flush with the adjacent surface and staked?				
<b>3.0</b>	<b>PRAIRIE Air System</b>				
3.1	Are all the air-emitting holes open?				
3.2	Are the air channel cover plate welds free of cracks?				
3.3	Are the PRAIRIE air inlet holes free of damage or deficiencies?				
3.4	Do the PRAIRIE air inlet hole seal surfaces have a maximum surface finish of 32 Ra?				
<b>4.0</b>	<b>Blade Edges</b>				
4.1	Does the latest revision of the propeller drawing specify a: Knuckle [ ] Fairing Radius [ ]				
4.2	Does the propeller have a: Knuckle [ ] Fairing Radius [ ]				
4.2.1	Is the break of the knuckle sharp on all blades?				
4.2.2	Is the break of the knuckle free of defects?				
SERIAL NO.: _____					PAGE 2 OF _____

ITEM		YES	NO	NA	REMARKS
4.3	Does the latest revision of the propeller drawing specify a trailing edge radius of 1/64"? (If no, specify radius in remarks)				
4.4	Do the trailing edges have an edge radius of approximately 1/64"? (If no, specify radius in remarks)				
4.5	Is the trailing edge radius free of defects?				
4.6	Are the blade edges (first and last 10% of width) free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
4.7	For Class 1 propellers, are the blade edges free of porosity, which exceeds 0.010 inches in a one inch band from the fillet to the 0.975R, LE and TE?				
4.8	Are the blade edges (first and last 10% of width) free of damage and deficiencies (e.g., nicks, dents, bends, cable marks, flat spots, ridges, punch marks, gouges, etc.)?				
4.9	Are the blade edges (first and last 10% of width) free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
4.10	Are the leading and trailing edge outlines fair (not wavy)?				
4.11	Are the blade trailing edges free of curling?				
4.12	Are the blade edges free of punch marks within the first and last 10% of the blade width?				
<b>5.0</b>	<b>Blade Tips or MAF</b>				
5.1	Does the latest revision of the propeller drawing specify a: Knuckle [ ] Fairing Radius [ ]				
5.2	Does the propeller have a: Knuckle [ ] Fairing Radius [ ]				
5.2.1	Is the break of the knuckle sharp on all blades?				
5.2.2	Is the break of the knuckle free of defects?				
SERIAL NO.: _____					PAGE 3 OF _____

ITEM		YES	NO	NA	REMARKS
5.3	Does the latest revision of the propeller drawing specify that the tips or MAF TE have an edge radius of 1/64"? (If no, specify radius in remarks)				
5.4	Do the tips or MAF TE have an edge radius of approximately 1/64"? (If no, specify radius in remarks)				
5.5	Is the tip edge or MAF TE radius free of defects?				
5.6	Are the tip regions or MAF free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
5.7	For Class 1 propellers, are the tip regions or MAF free of porosity, which exceeds 0.010 inches in a 1-1/2 inch band from the LE 0.975R to the TE 0.975R?				
5.8	Are the tip regions or MAF free of damage and deficiencies (e.g., nicks, dents, bends, cable marks, flat spots, ridges, punch marks, gouges, etc.)?				
5.9	Are the tip or MAF edge outlines fair (not wavy)?				
5.10	Are the blade tip regions or MAF free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
5.11	Does the propeller have bolt on blade tips?				
5.11.1	Is the tip cover plate flush with the tip surface?				
5.11.2	Are the cover plate screws present and flush with the cover plate?				
5.11.3	Is the tip and blade casting free of visible gaps? (If no, record location (LE or TE) and amount on sketch)				
5.11.4	Is the transition between the tip and blade casting smooth and fair (e.g.; no tip displacement)? (if no, record location (LE or TE), amount and direction (toward PF or SF) on sketch)				
<b>6.0</b>	<b>Blade Surfaces</b>				
6.1	Are the blade surfaces free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
6.2	Are the blade surfaces free of damage and deficiencies (e.g., dents, gouges, cable marks, etc.)?				

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ITEM		YES	NO	NA	REMARKS
6.3	Are the blade surfaces free of cavitation erosion?				
6.4	Are the blade surfaces fair (not wavy)?				
6.5	Are the blade surfaces free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
6.6	Are the blade surfaces free of punch marks and scribe lines, which exceed 0.030 inches in width or depth?				
<b>7.0</b>	<b>Fillet Areas</b>				
7.1	Are the fillet areas free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
7.2	Are the fillet areas free of damage and deficiencies (e.g., dents, gouges, ridges, cable marks, etc.)?				
7.3	Are the fillet areas free of cavitation erosion?				
7.4	Are the fillets fair (not wavy)?				
7.5	Are the fillet areas free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
<b>8.0</b>	<b>Hub (Monobloc only)</b>				
8.1	Is the hub free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
8.2	Is the hub exterior surface free of damage and deficiencies, (e.g., dents, gouges, cable marks, etc.)				
8.3	Is the hub exterior free of cavitation erosion?				
8.4	Is the hub exterior fair (not wavy)?				
8.5	Is the hub exterior free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
8.6	Is the gland seal area at forward end of the hub bore free of damage, deficiencies (e.g., gouges, scoring, etc.) and porosity greater than 0.030 inches?				
8.7	Is the O-ring sealing surface on the hub aft face free of damage, deficiencies, and porosity greater than 0.030 inches?				

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ITEM		YES	NO	NA	REMARKS
8.8	Are the keyway(s) free of damage and deficiencies (e.g., nicks, dents, etc.)?				
8.9	Is the hub interior surface free of damage and deficiencies (e.g., dents, gouges, cable marks, raised metal)?				
8.10	Is the hub interior free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
8.11	Are the fill and vent passages clear of obstructions?				
<b>9.0</b>	<b>Controllable Pitch Propeller Palm</b>				
9.1	Are the palm top faces free of damage or deficiencies (e.g., gouges, nicks, dents, etc.)?				
9.2	Are the palm bolt holes free of damage or deficiencies (e.g., gouges, nicks, dents, etc.)?				
9.3	Are the palm bottoms free of damage or deficiencies (e.g., gouges, nicks, dents, etc.)?				
9.4	Are the palm dowel pin holes free of damage or deficiencies (e.g., gouges, scoring, nicks, dents, etc.)?				
9.5	Are the palms free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
9.6	Are the palms free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
9.7	Are the palm O-ring sealing surfaces free of damage, deficiencies, and porosity greater than 0.030 inches?				
<b>10.0</b>	<b>Is the propeller free of marine growth?</b>				
<b>11.0</b>	<b>Surface Finish</b>				
11.1	Is the hub O.D. surface a maximum of 125 Ra?				
11.2	Are the blade surfaces a maximum of 63 Ra? (for Class I & II propellers)				
11.3	Are the blade surfaces a maximum of 125 Ra? (for Class III & IV propellers)				
11.4	Are all O-ring sealing surfaces a maximum of 32 Ra?				

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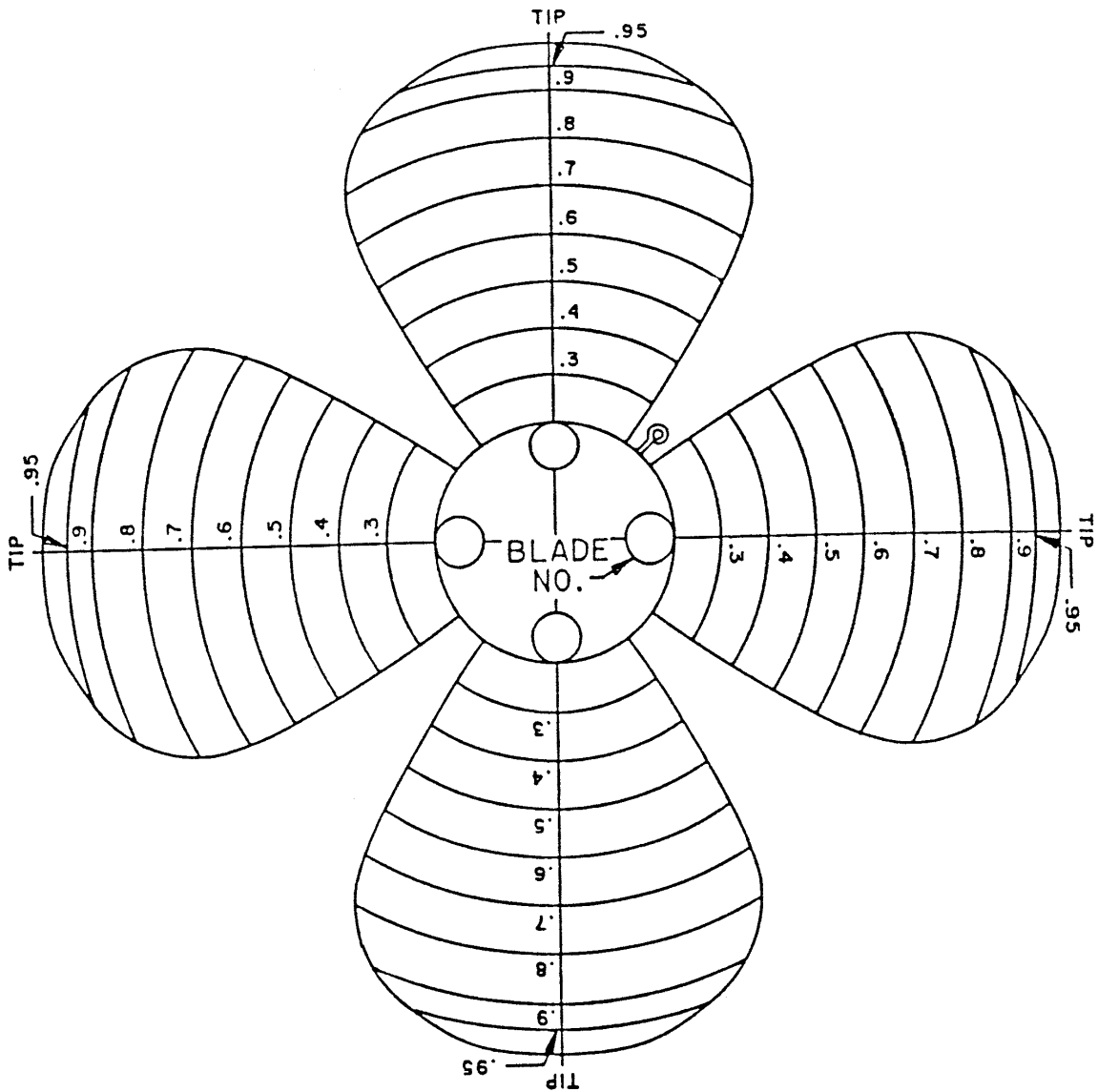
ITEM		YES	NO	NA	REMARKS
12.0	Are the propeller blade surfaces coated with anti-fouling paint?				
13.0	For new manufacture or new weld repair areas, does the propeller meet MIL-STD-2035 acceptance criteria?				
14.0	Does the condition of this propeller indicate that it will provide satisfactory service?				
15.0	Provide a brief description of the repairs considered necessary to restore this propeller to a serviceable condition.				
16.0	Hub/Palm Stamped Data (Exactly as stamped) Continue on Form 7A for CPP blade sets or if necessary.				
17.0	Additional Comments. (Use additional sheets, if necessary)				
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**16.0 Hub/Palm Stamped Data (continued)**

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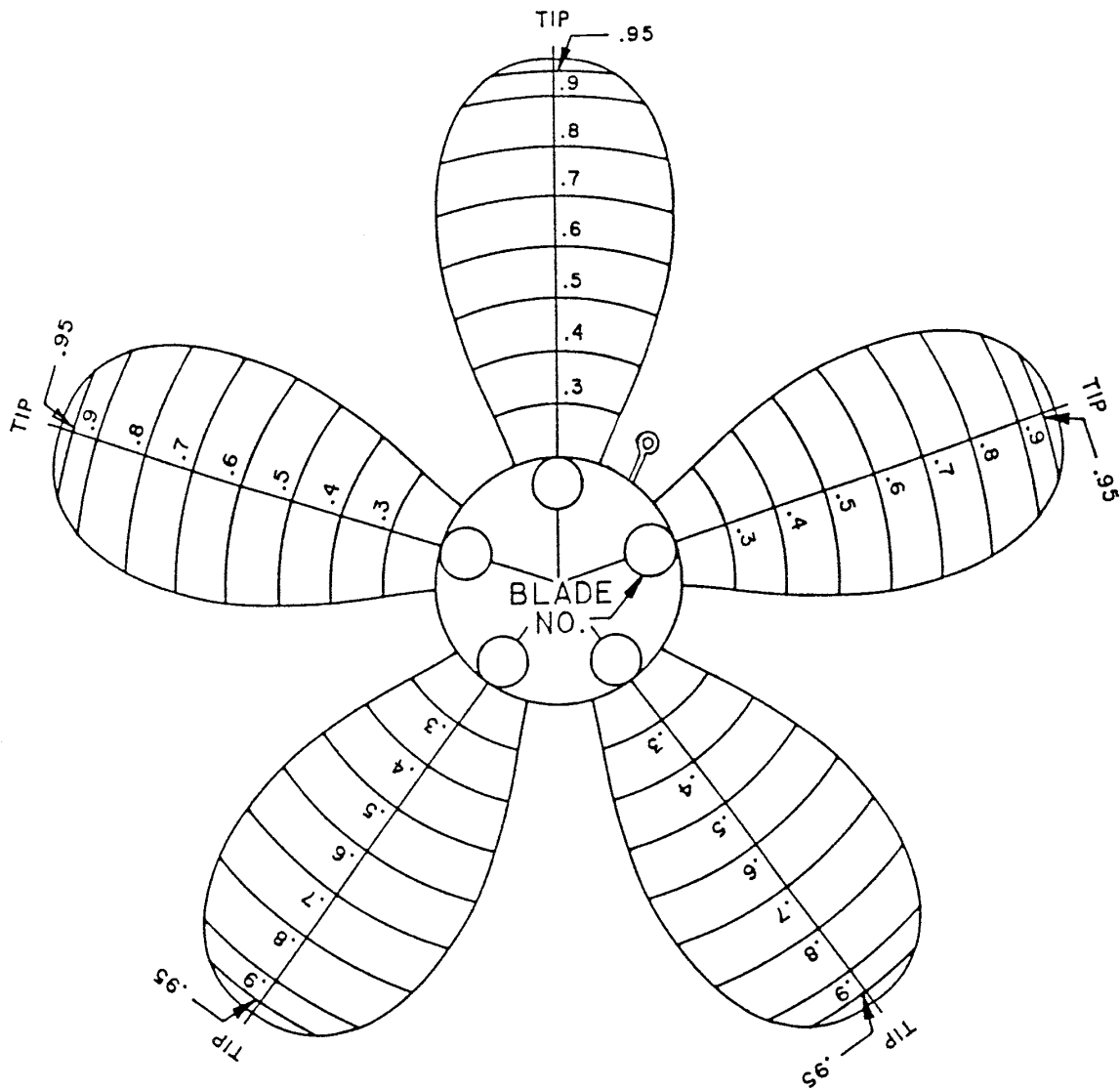
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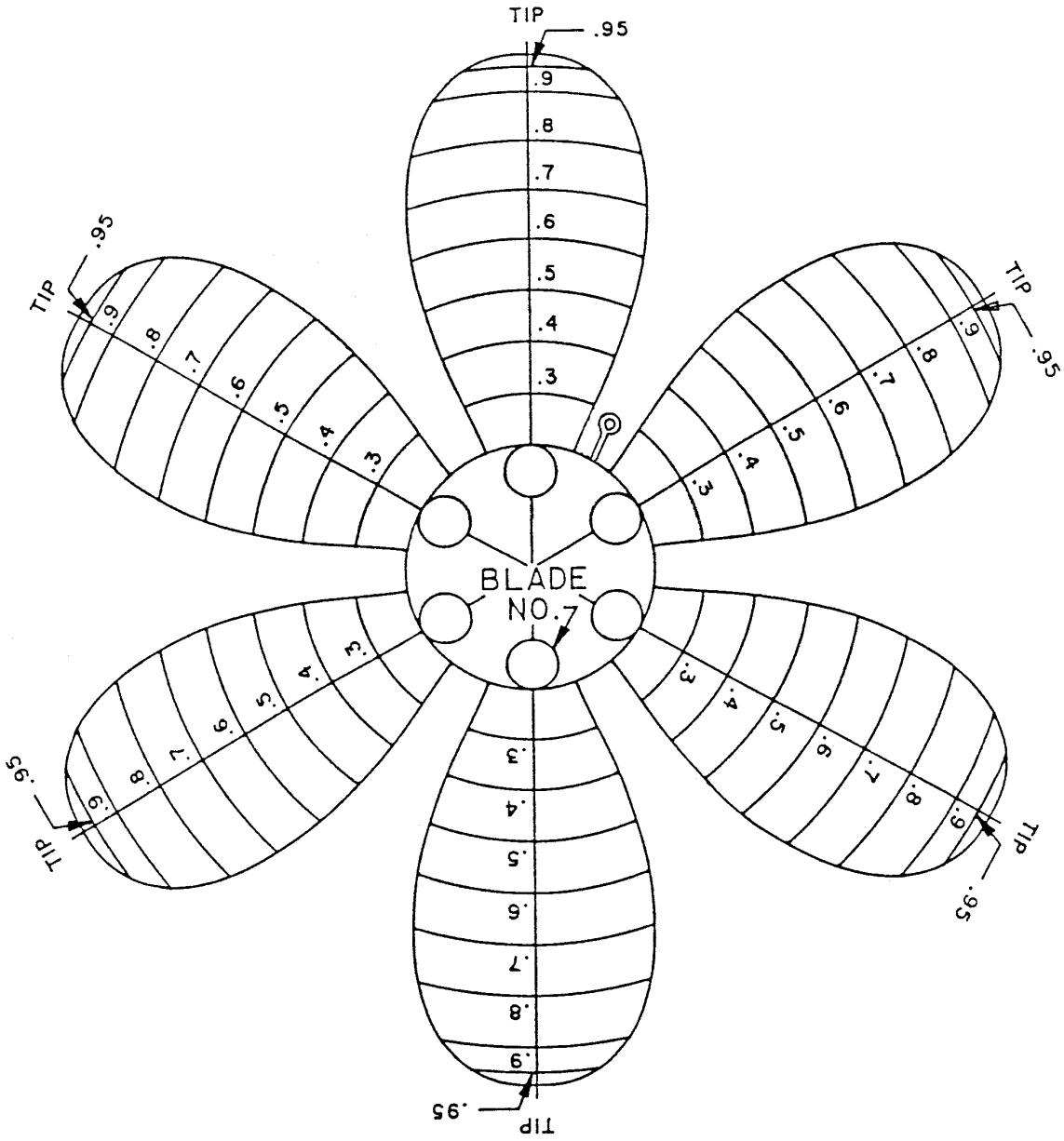
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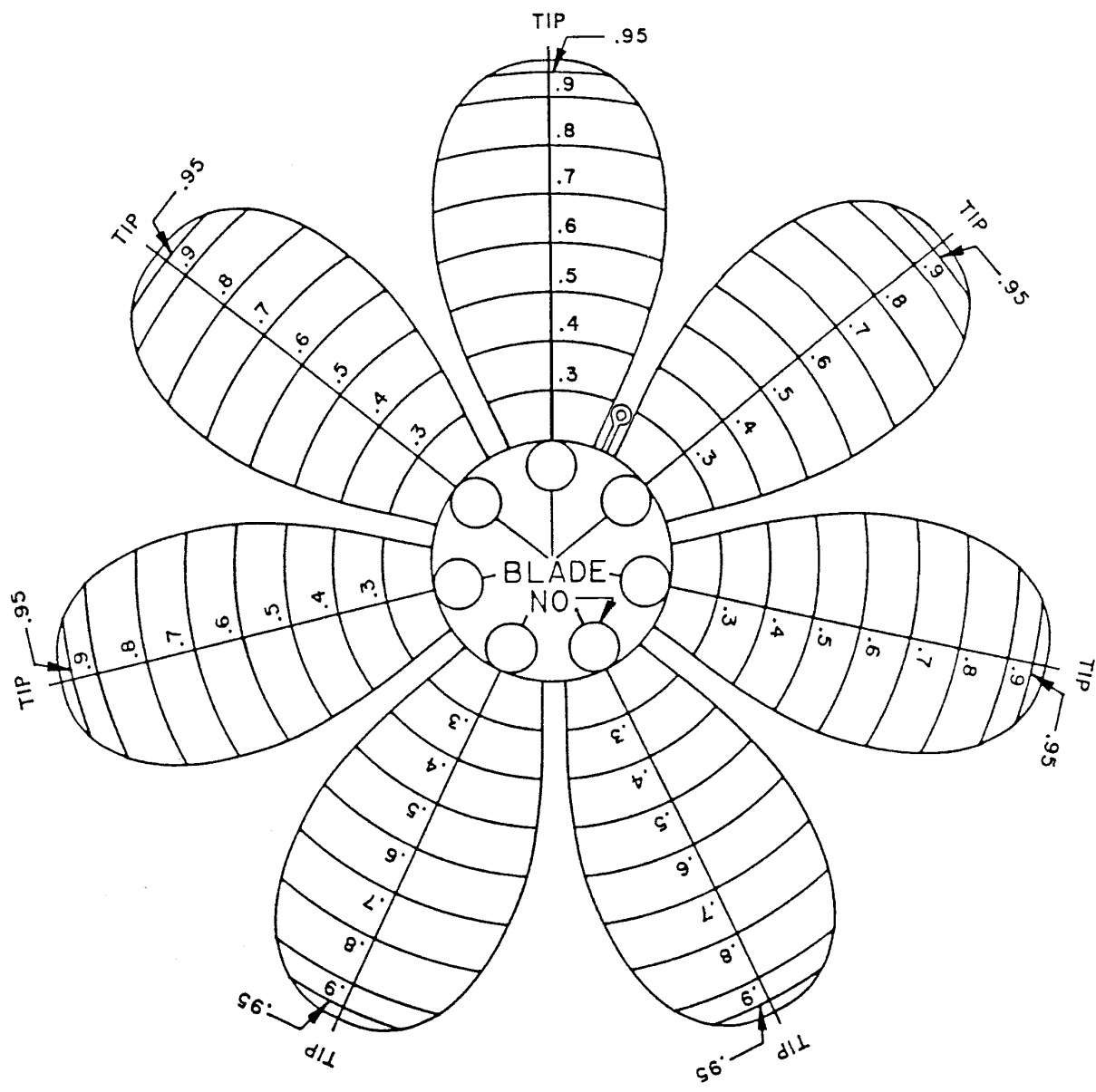
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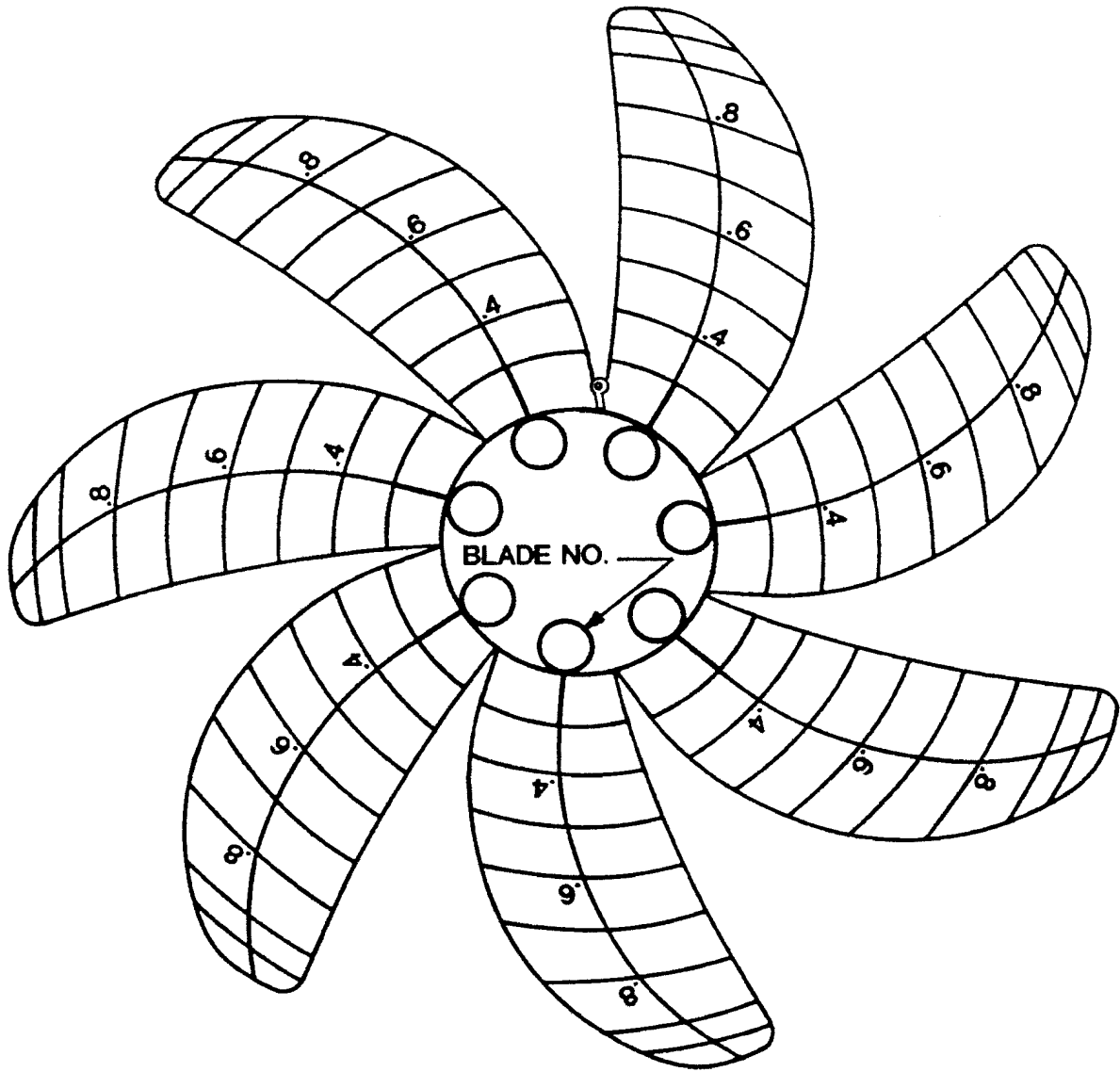
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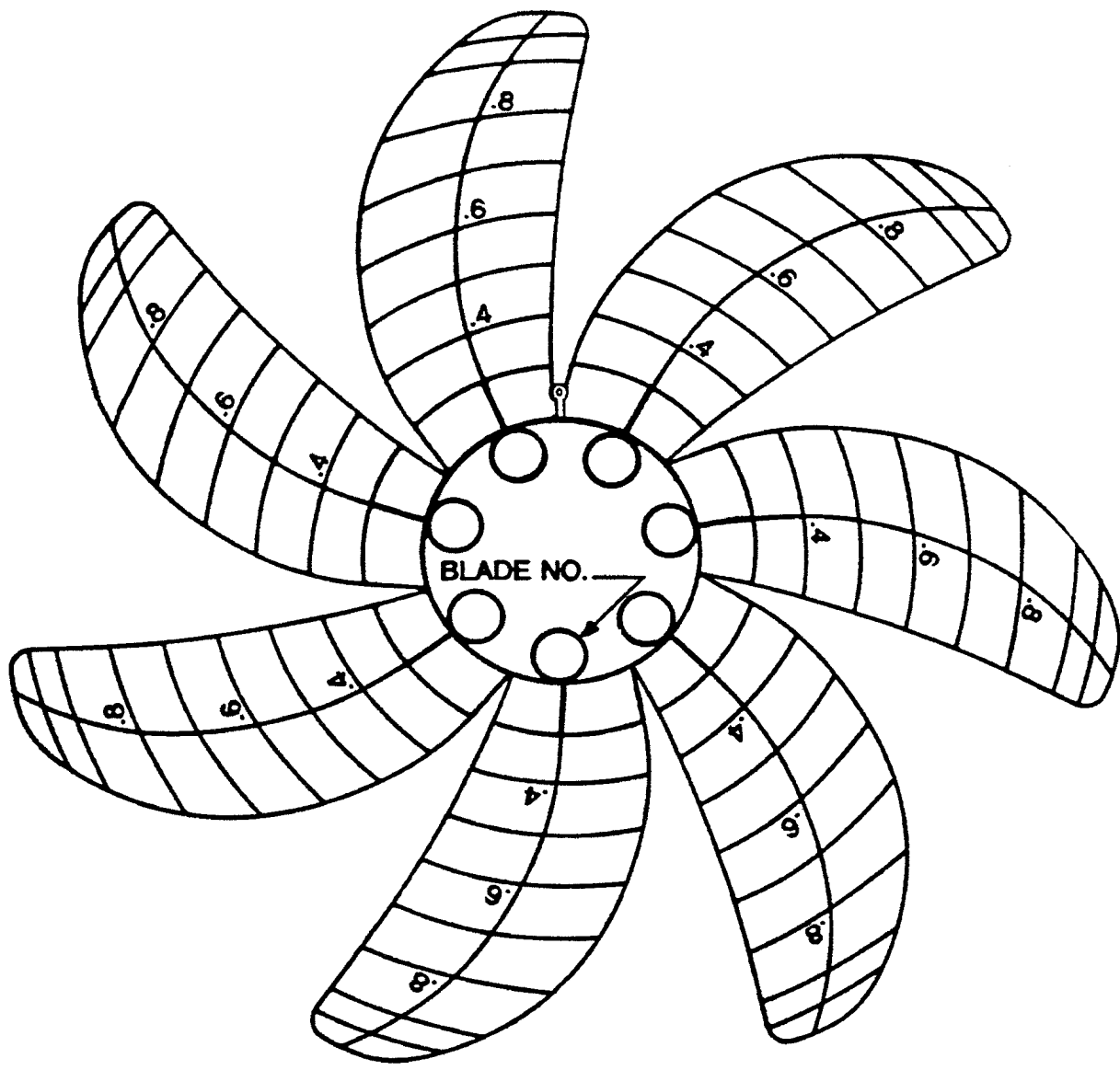
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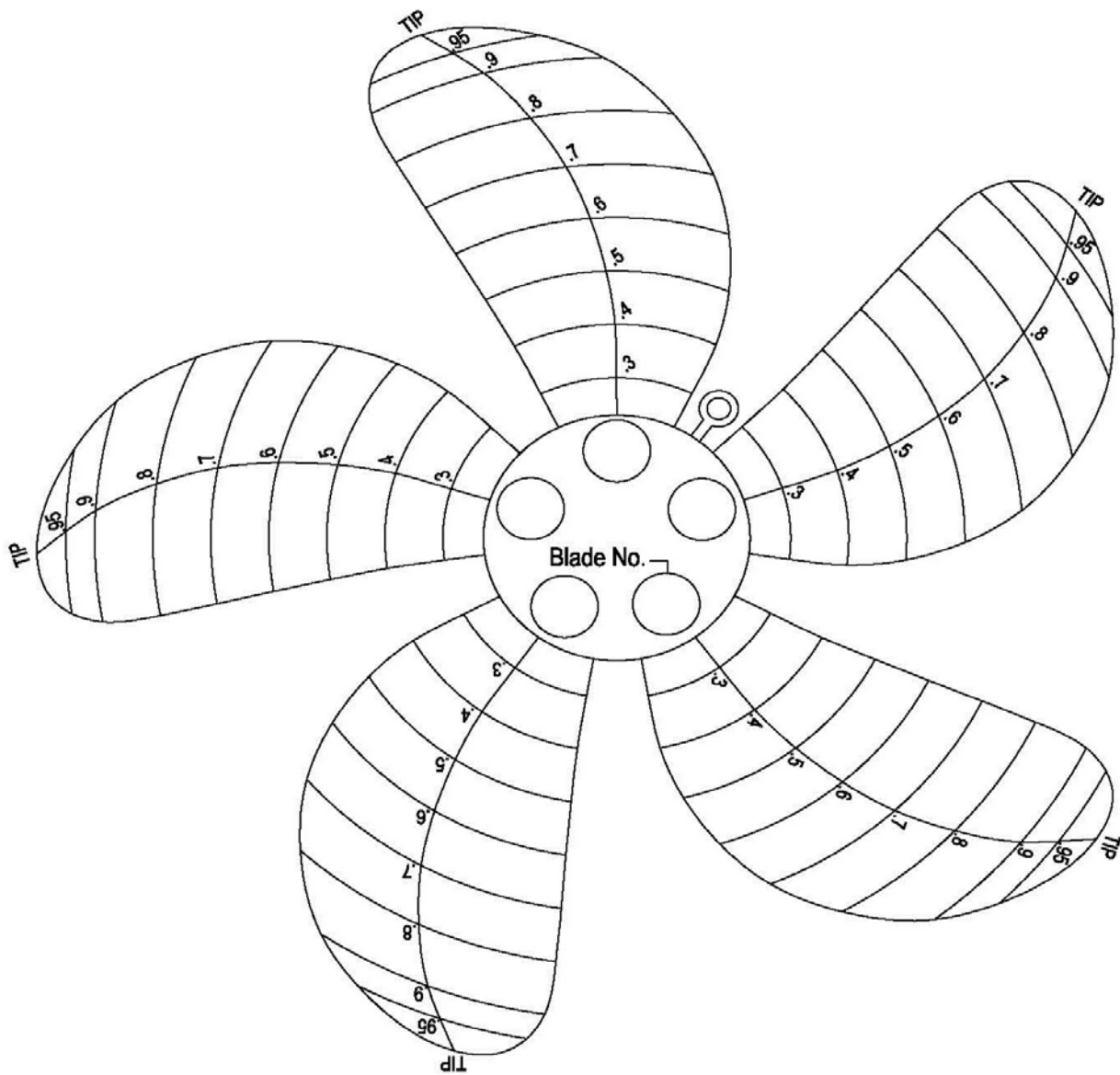
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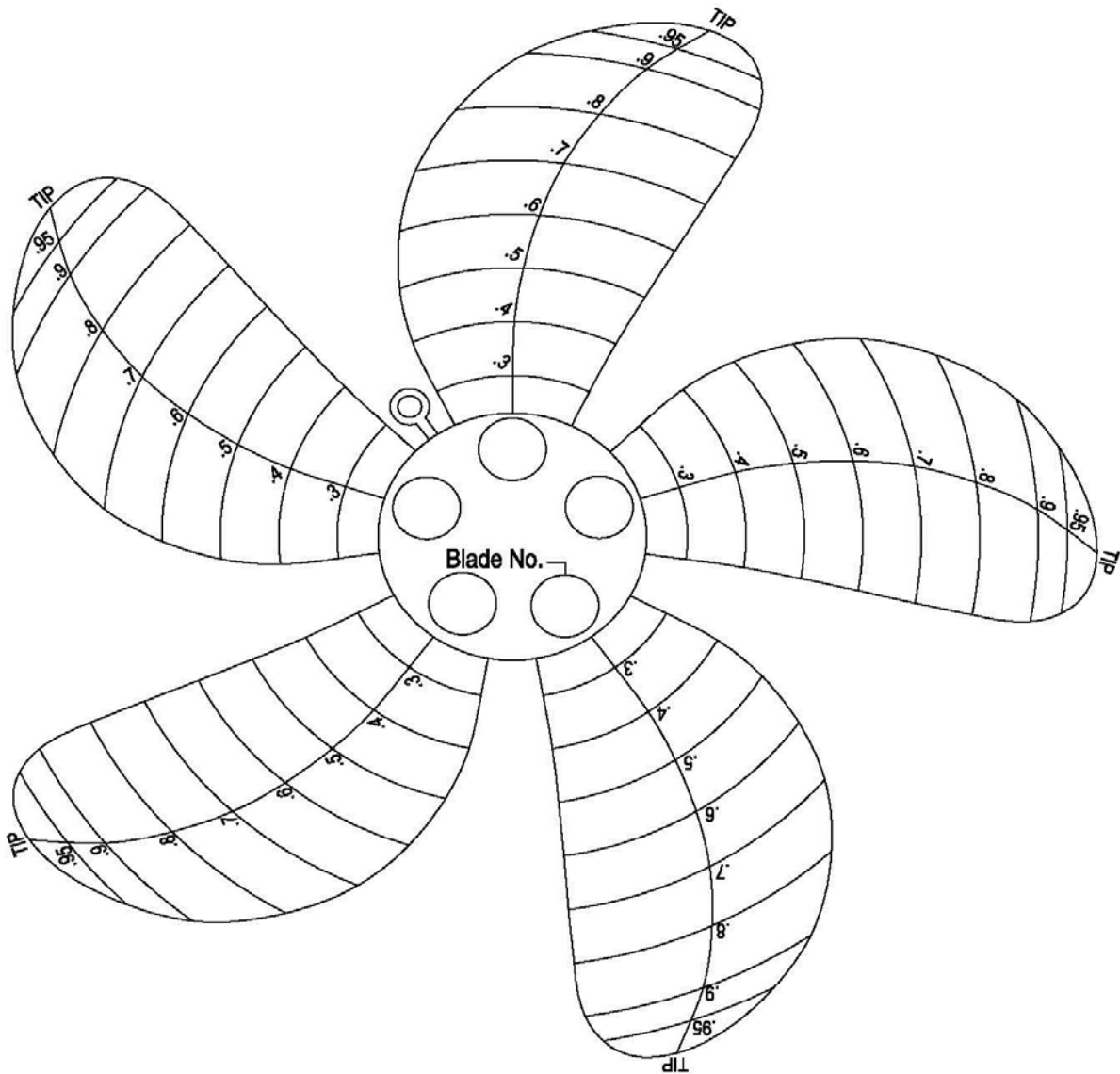
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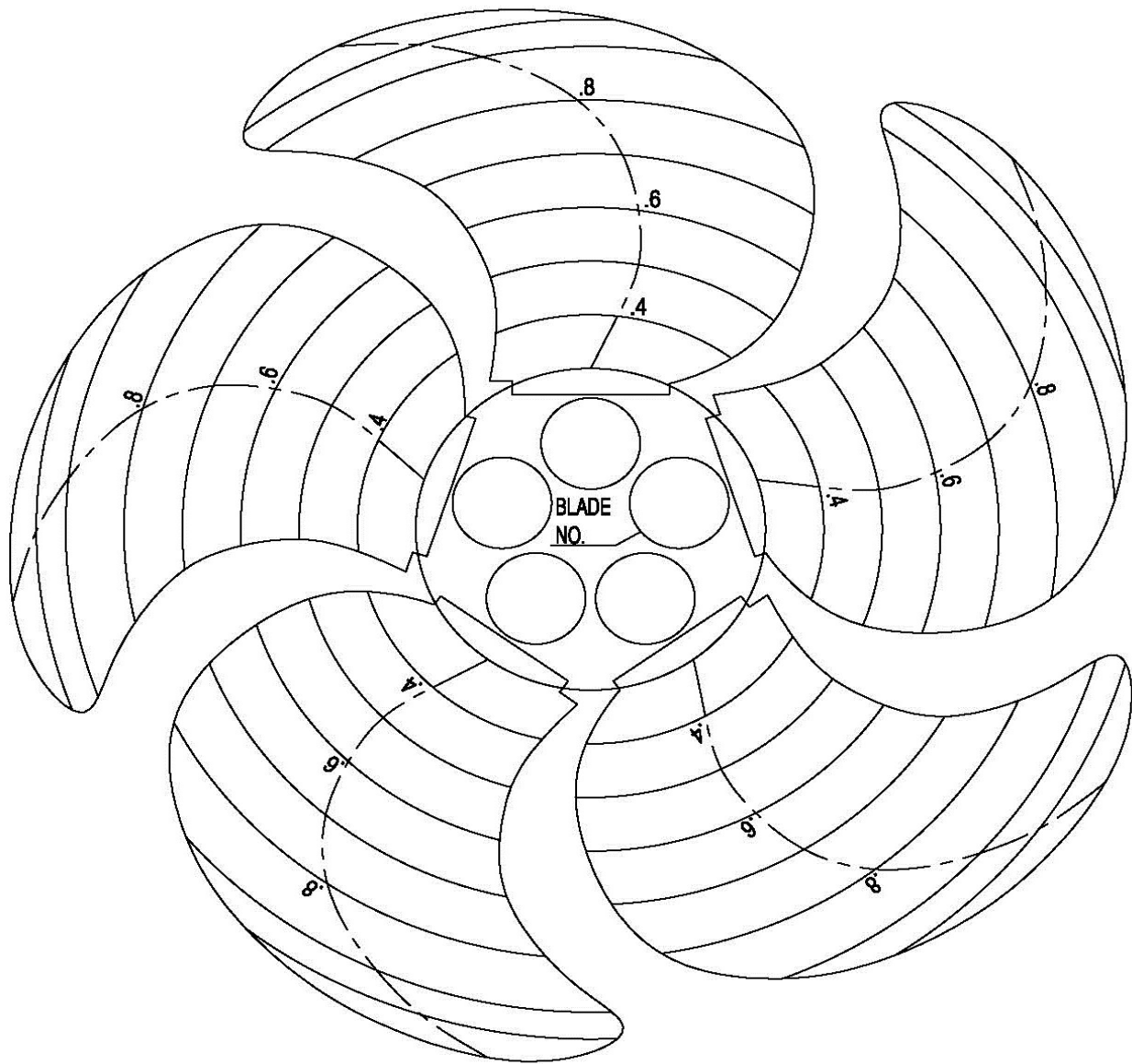
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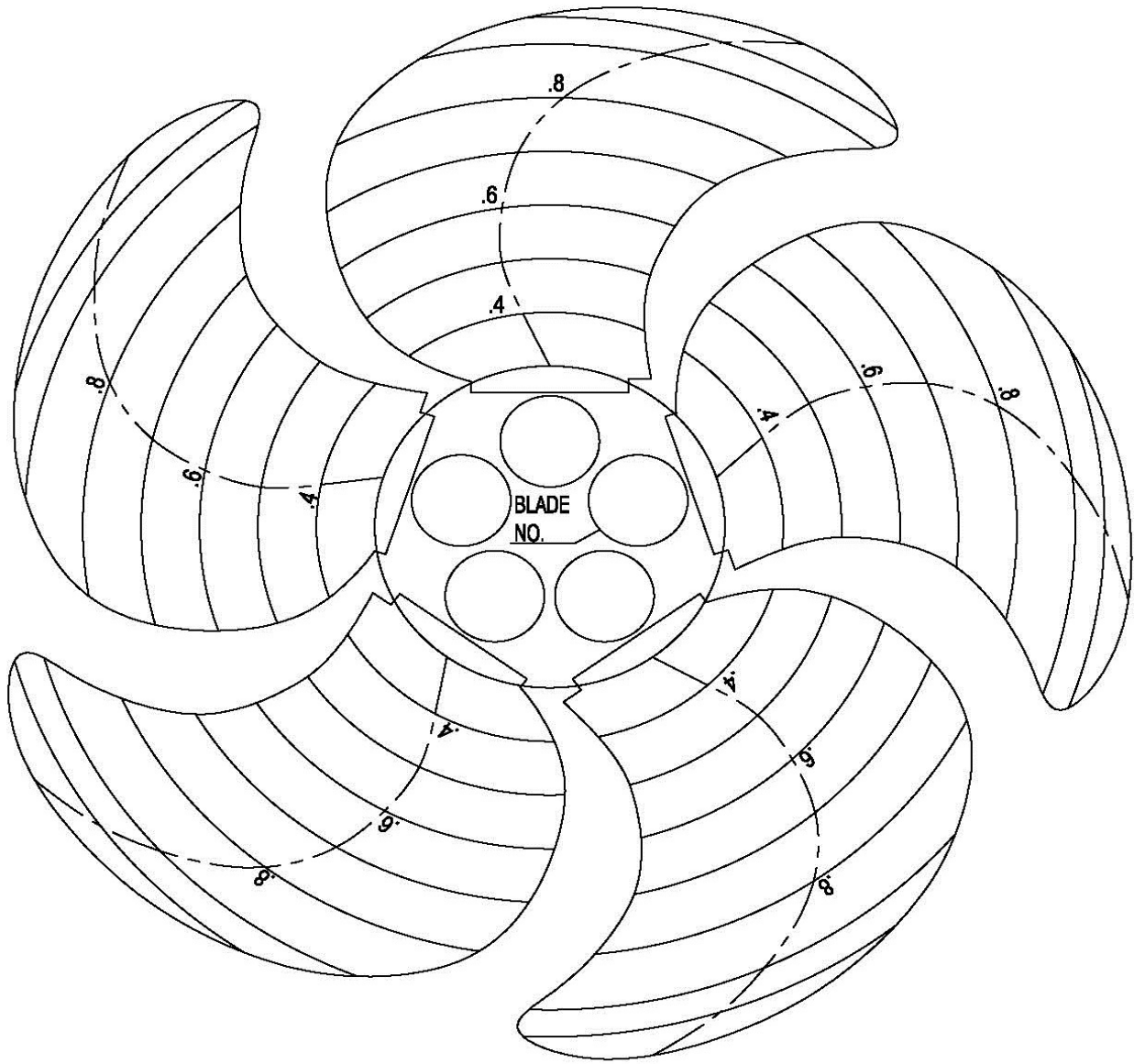
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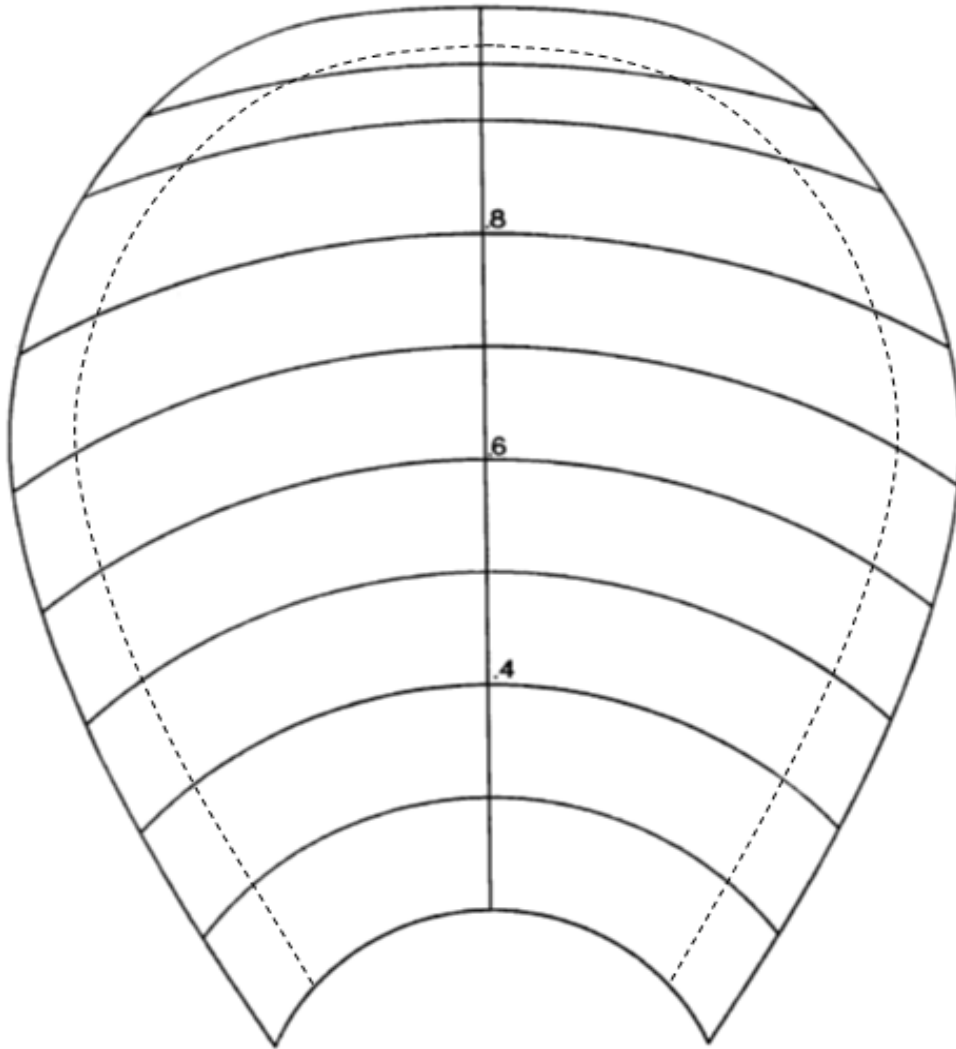
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BLADE NO. \_\_\_\_\_

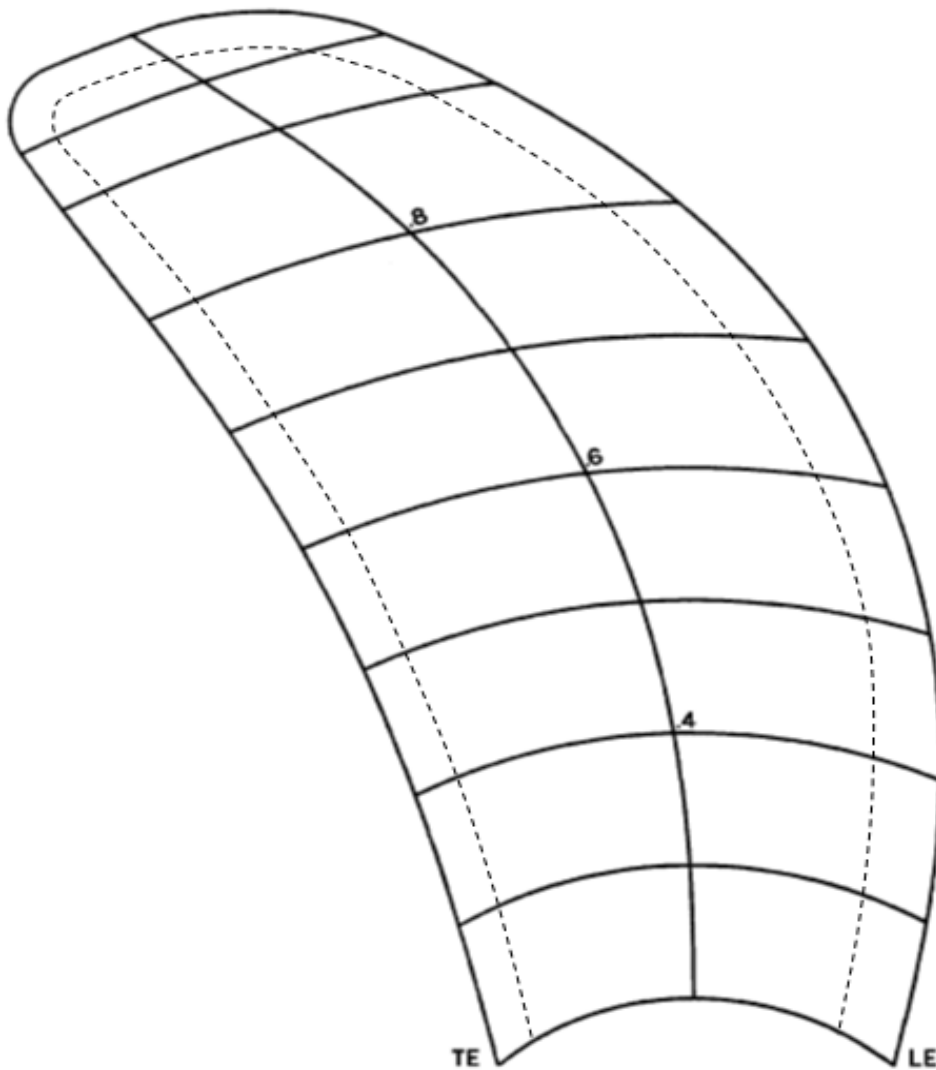
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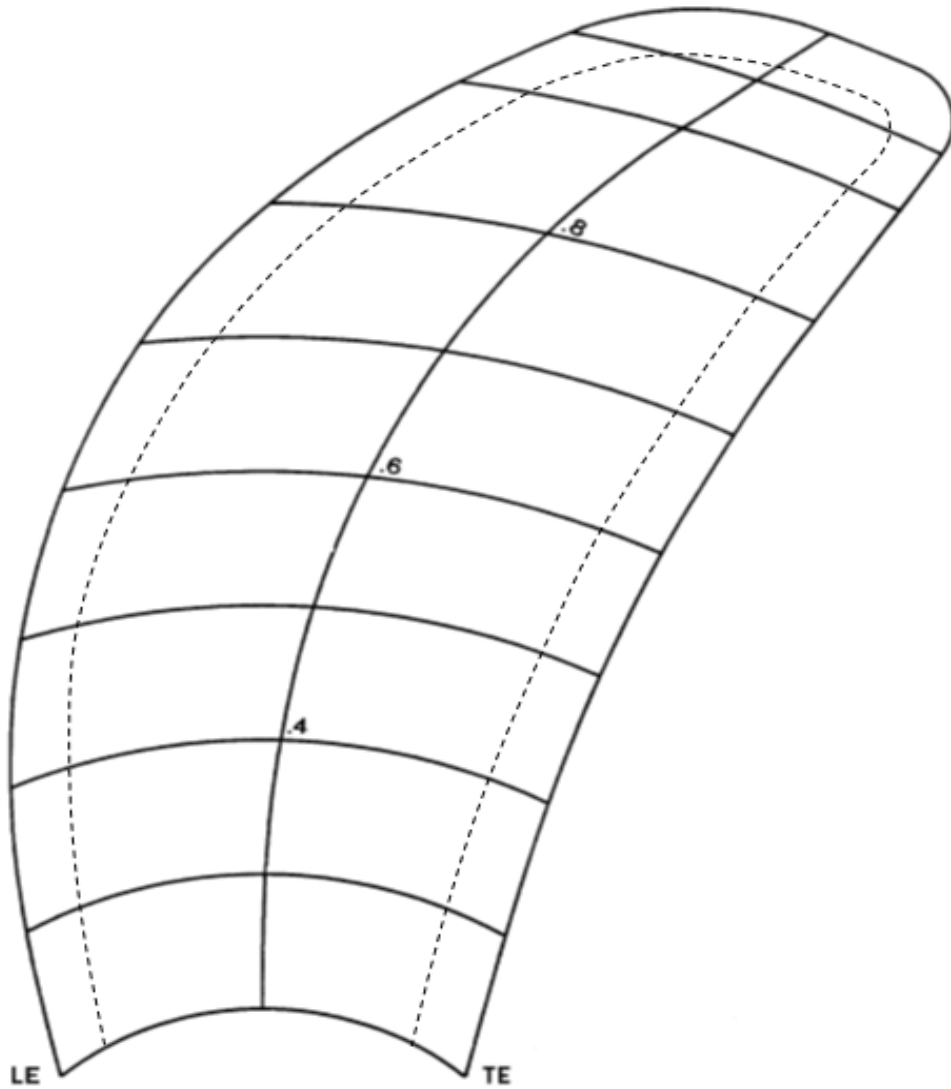
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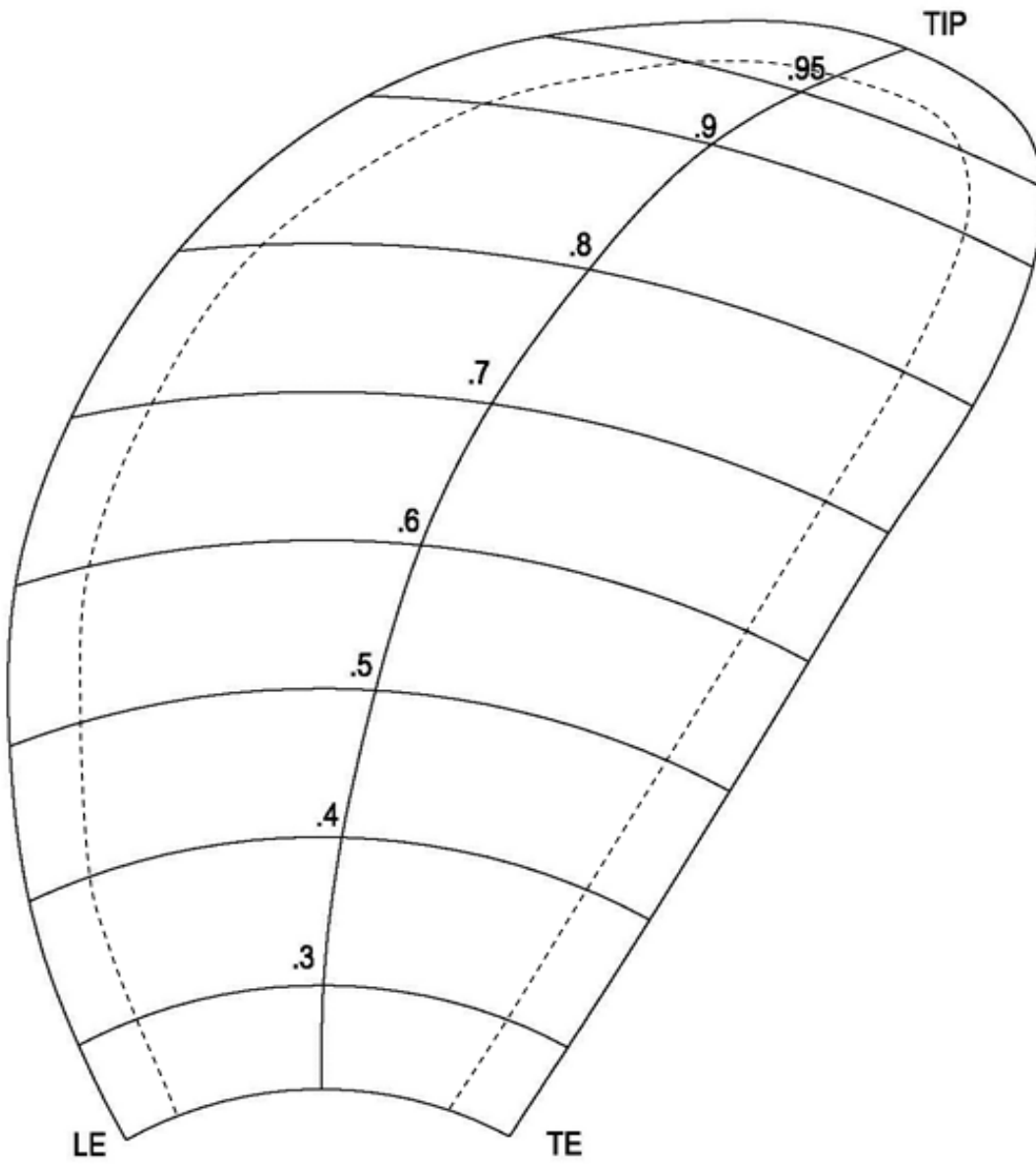
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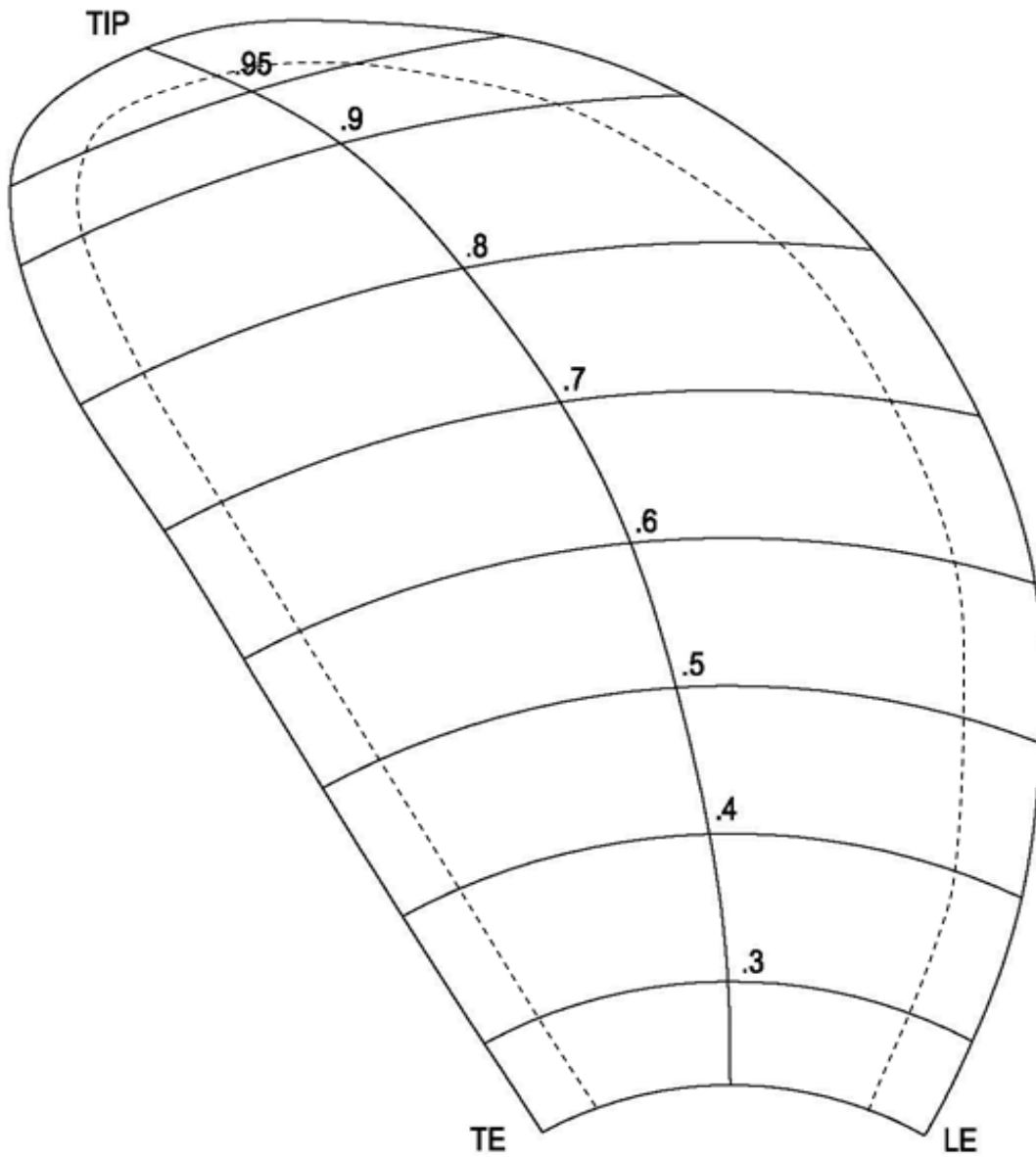
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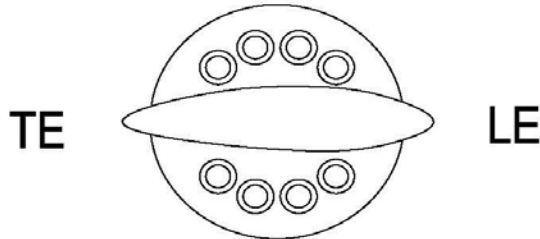
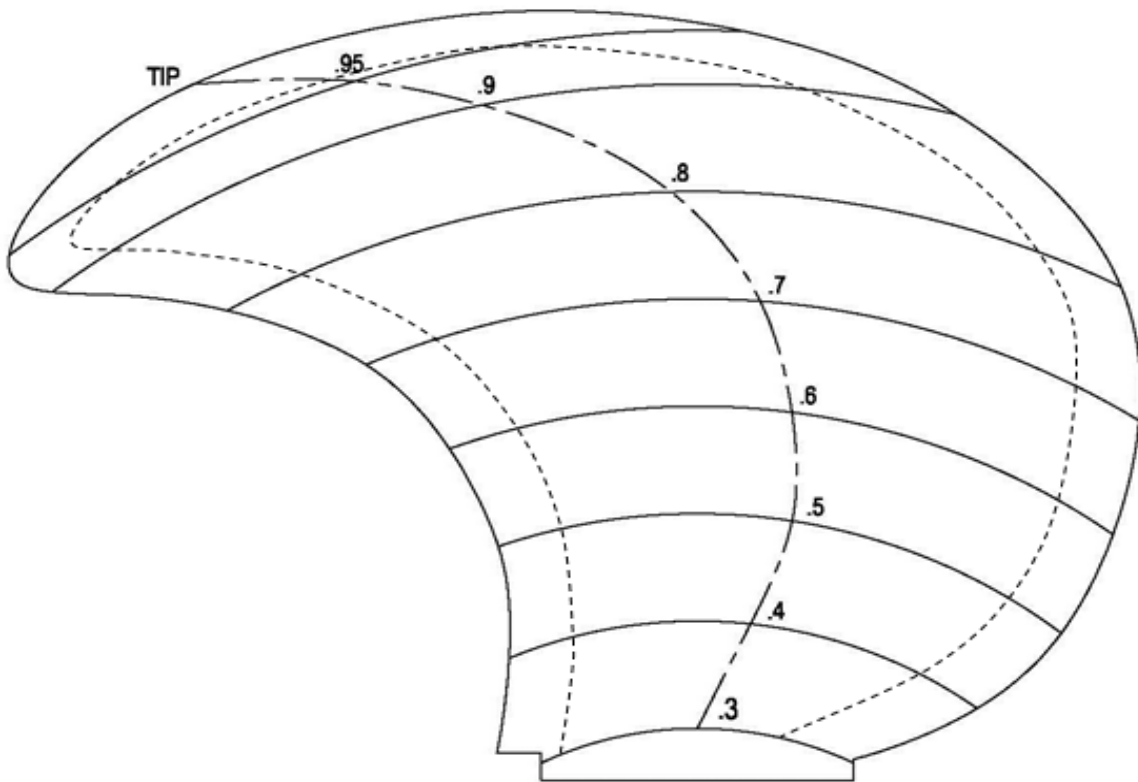
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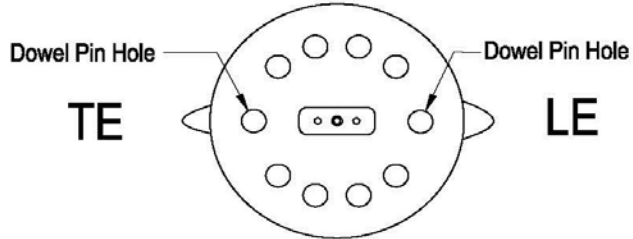
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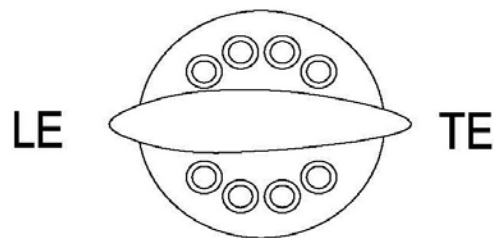
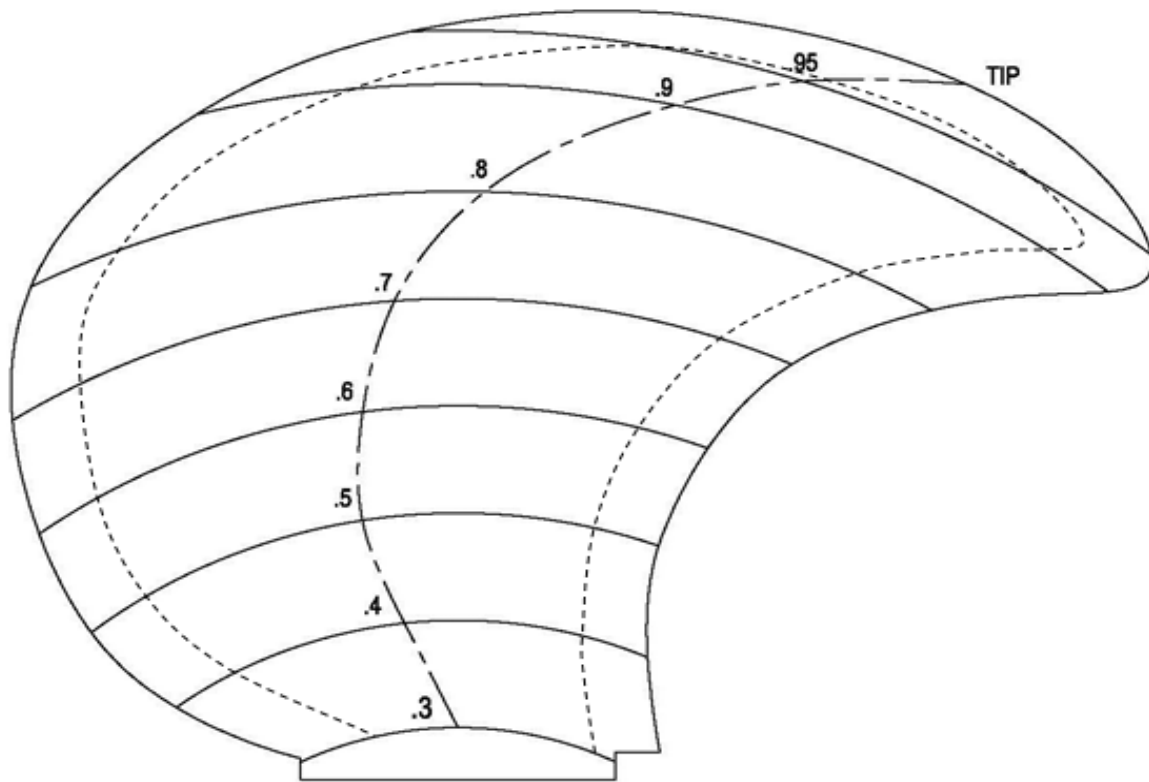


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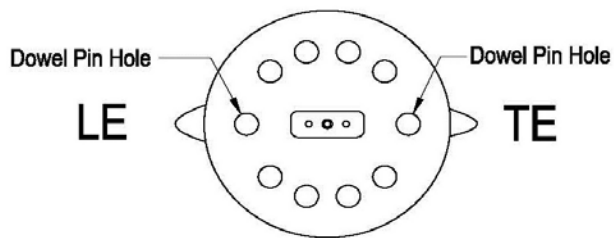
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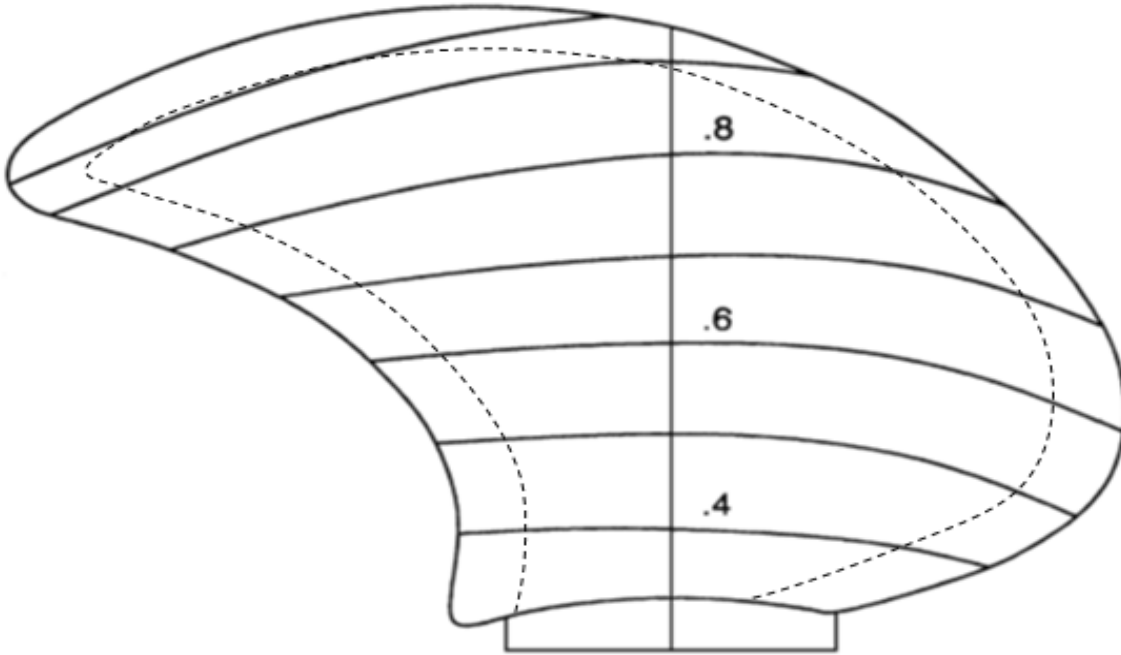
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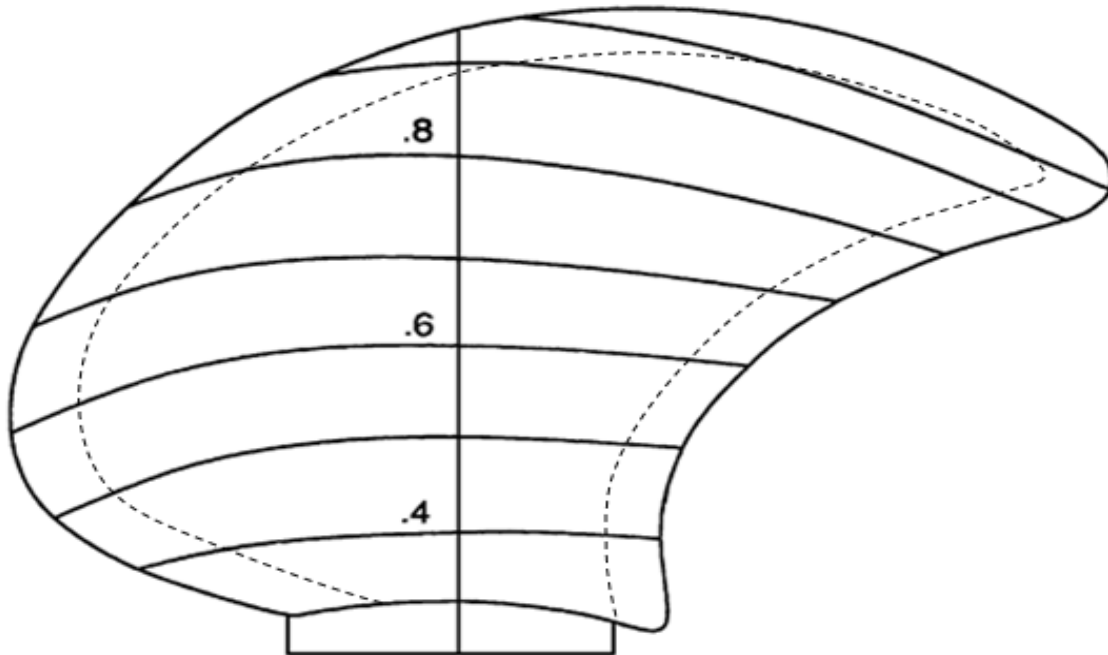
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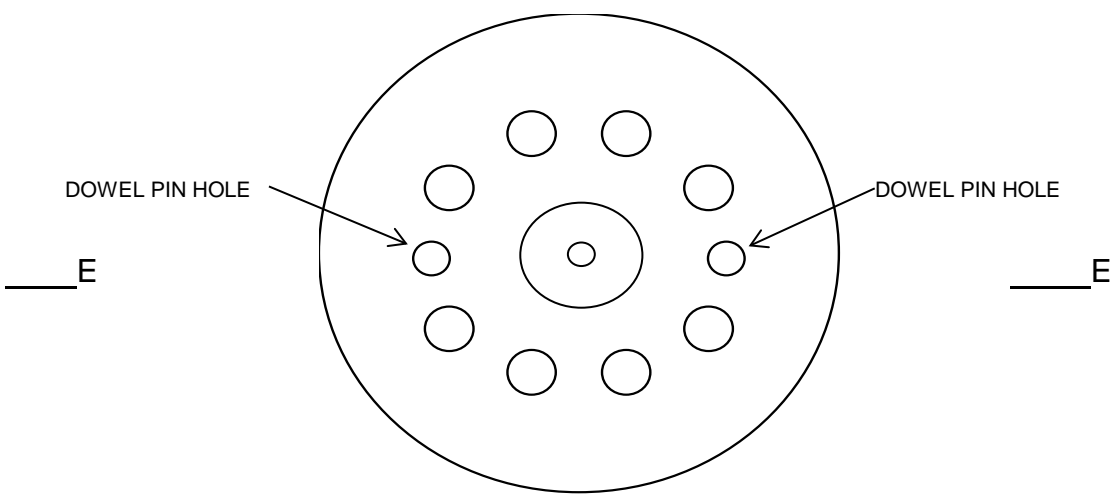
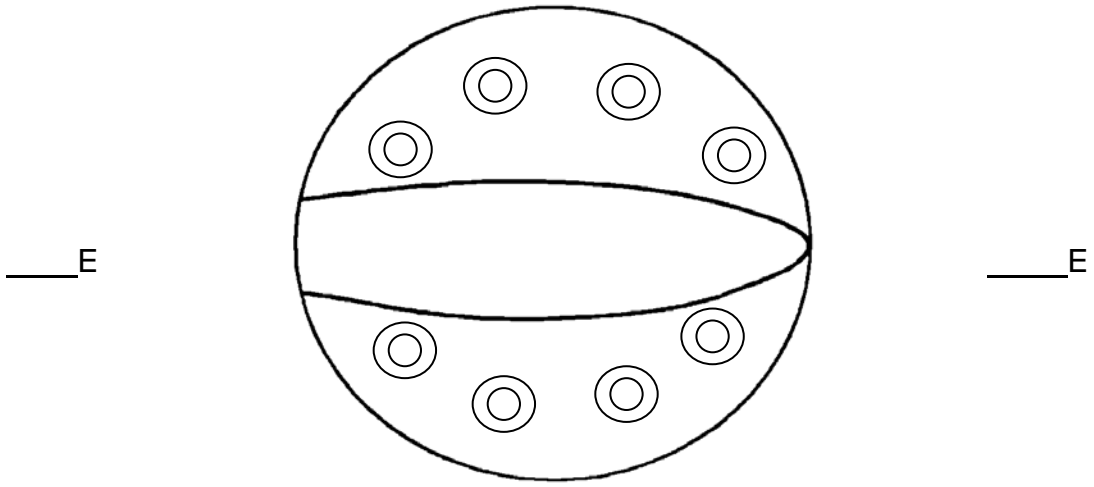
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# BLADE PALM



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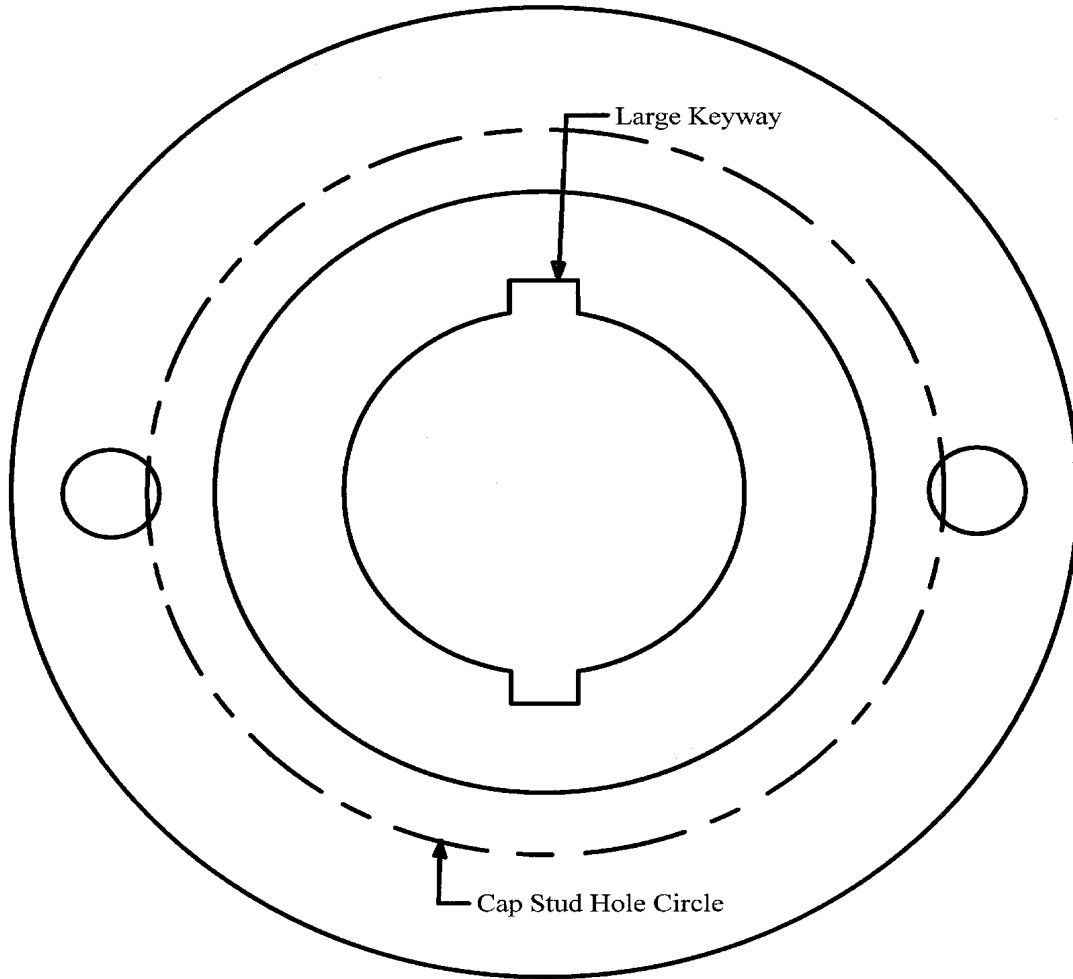
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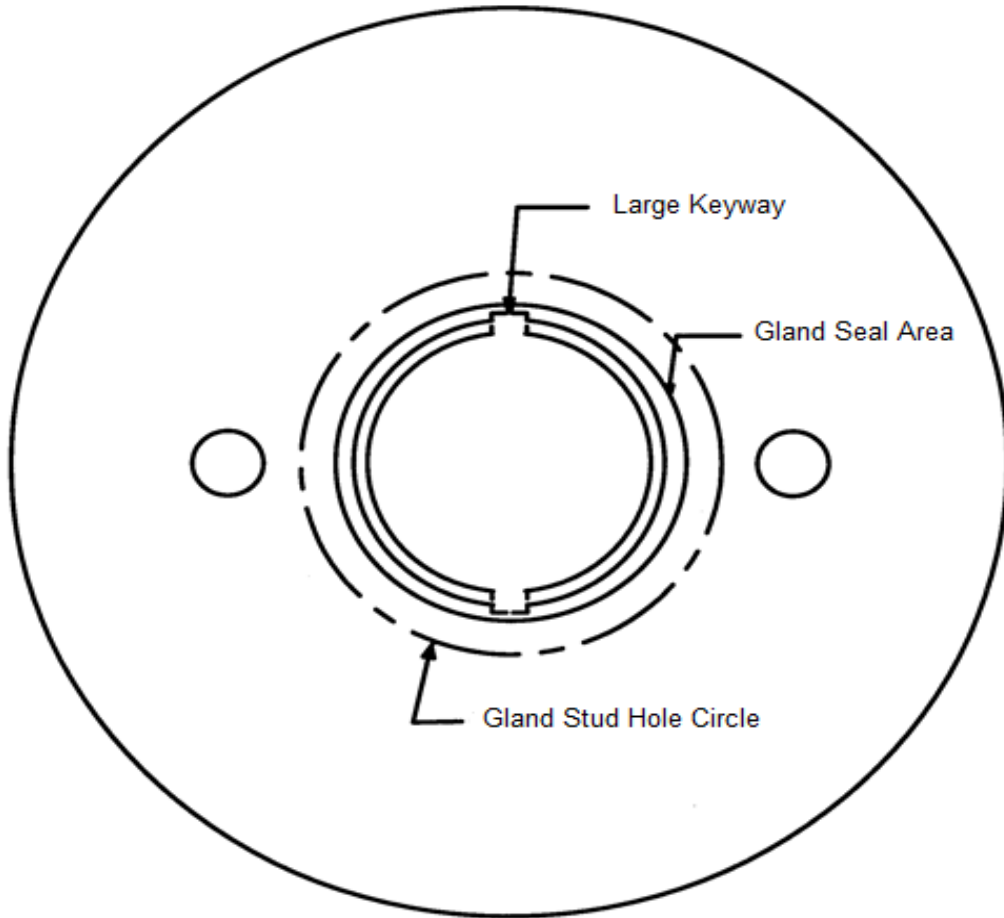


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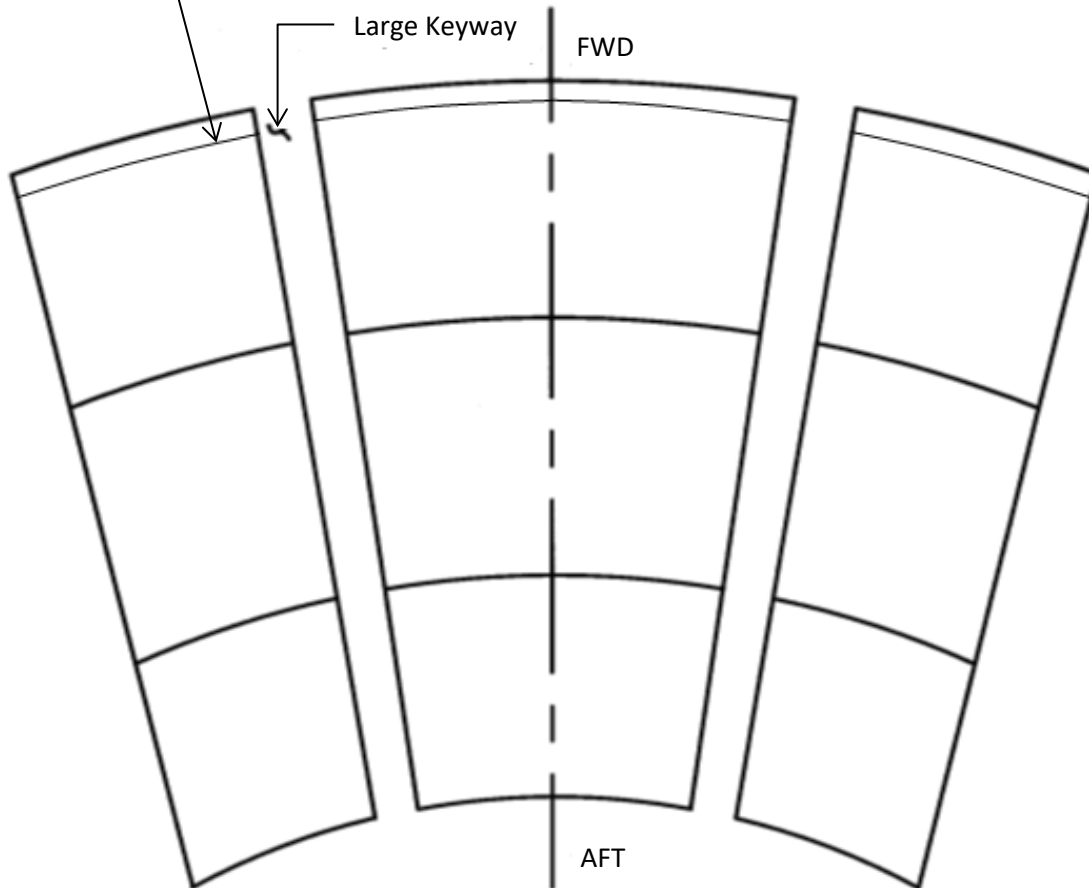
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# BORE

HOOP STRESS RELIEF GROOVE

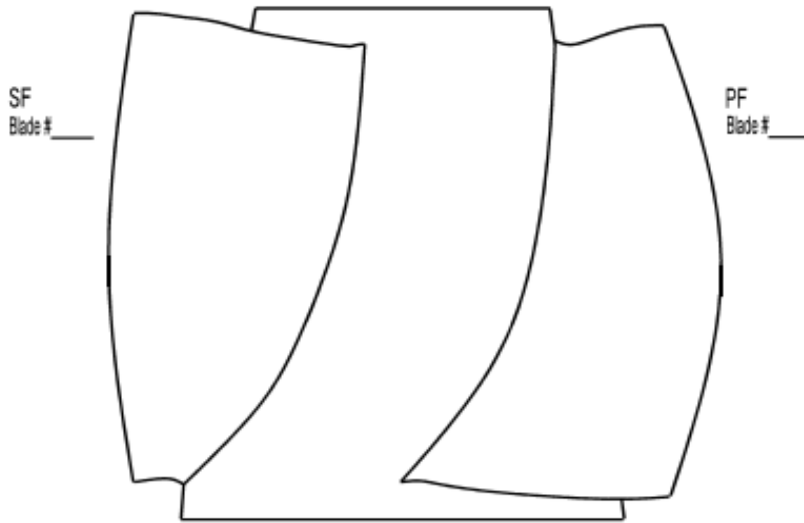
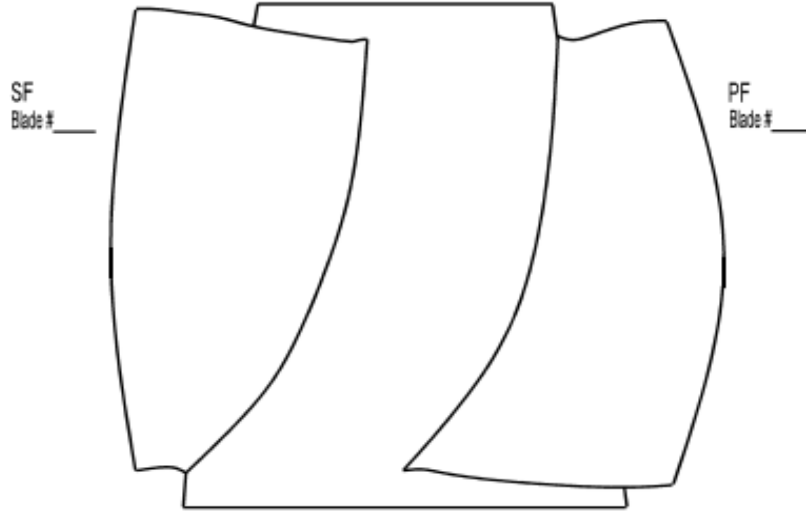


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**FILLET AREA & HUB O.D.  
RH PROPELLER**



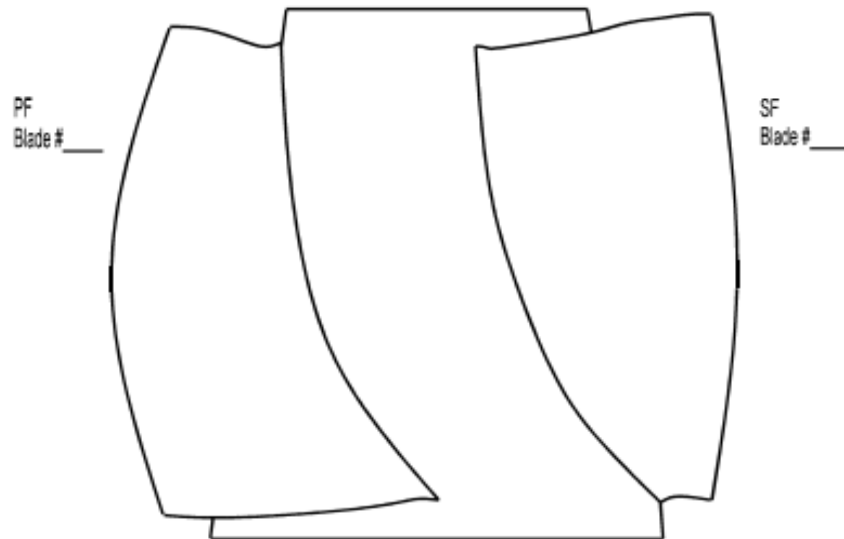
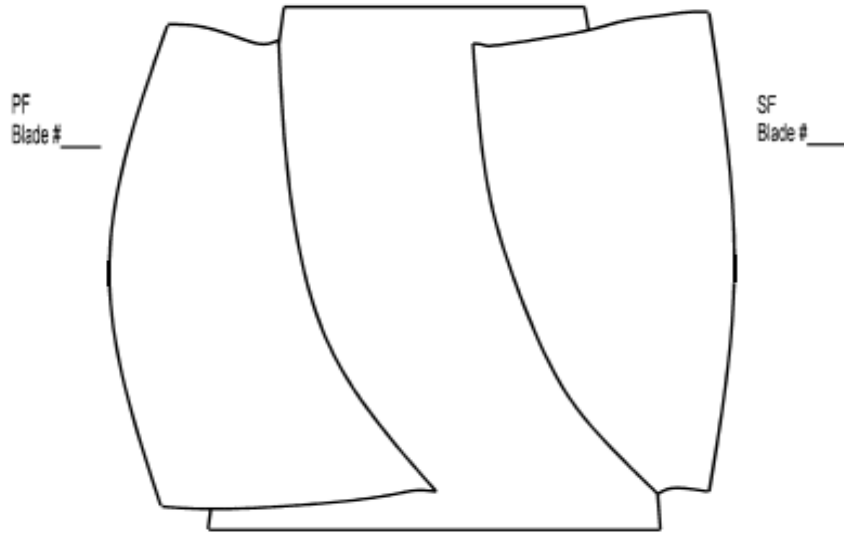
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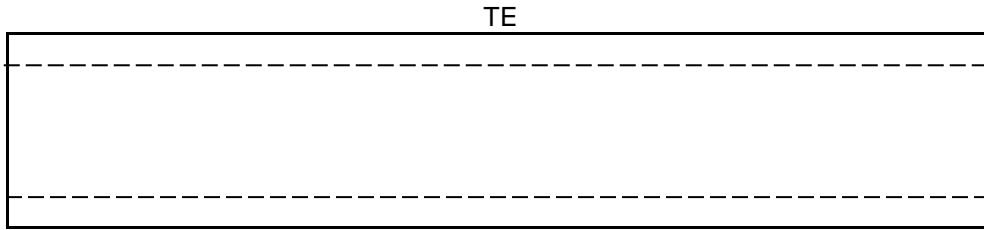
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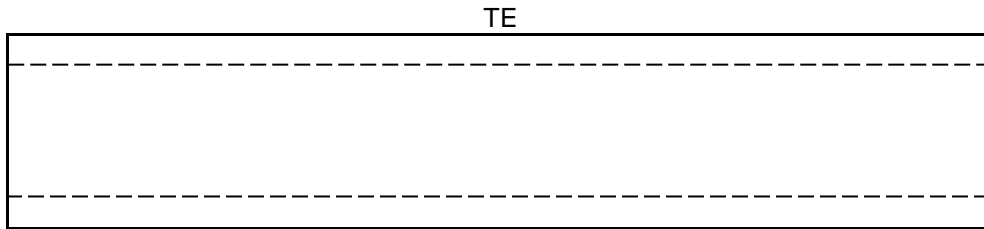
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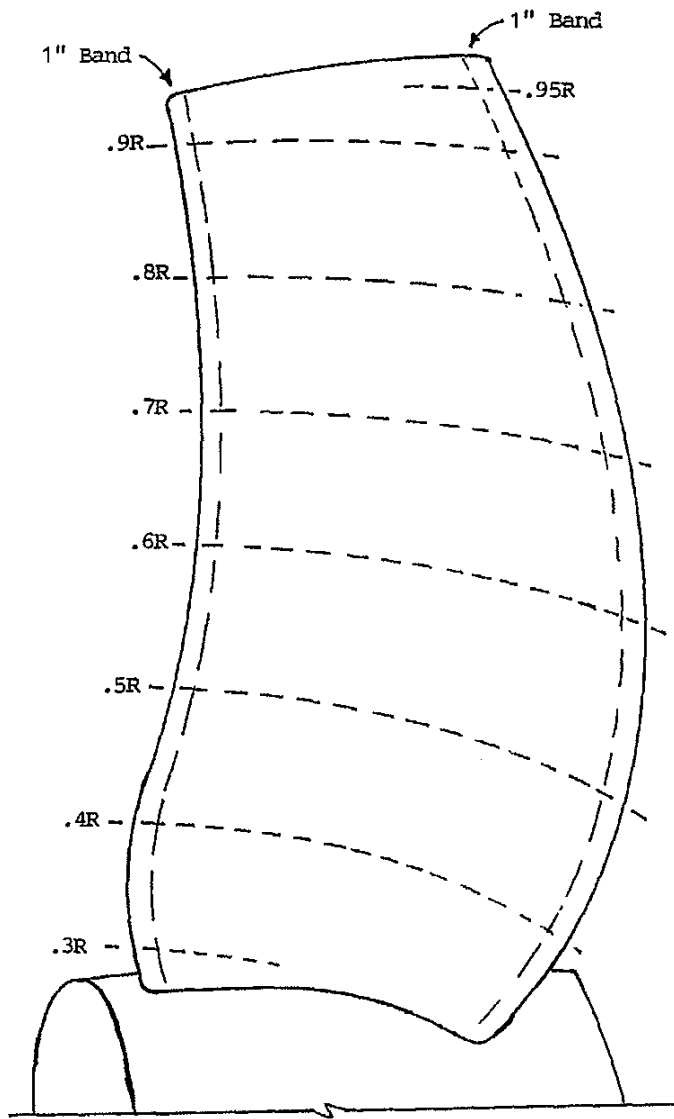
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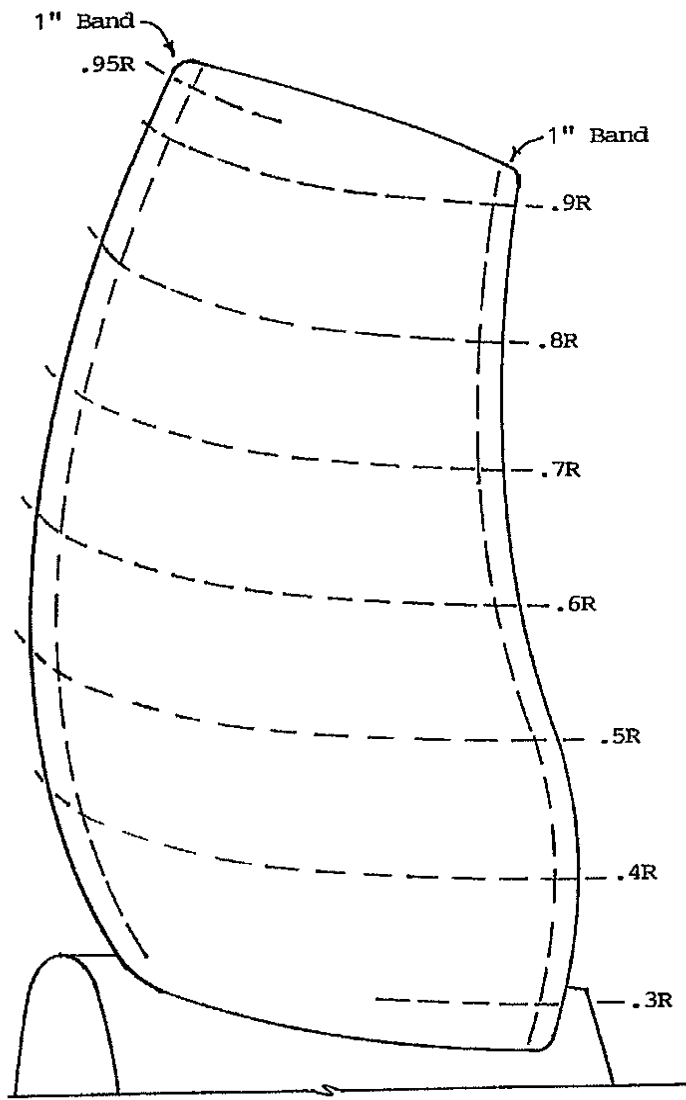


PRESSURE FACE

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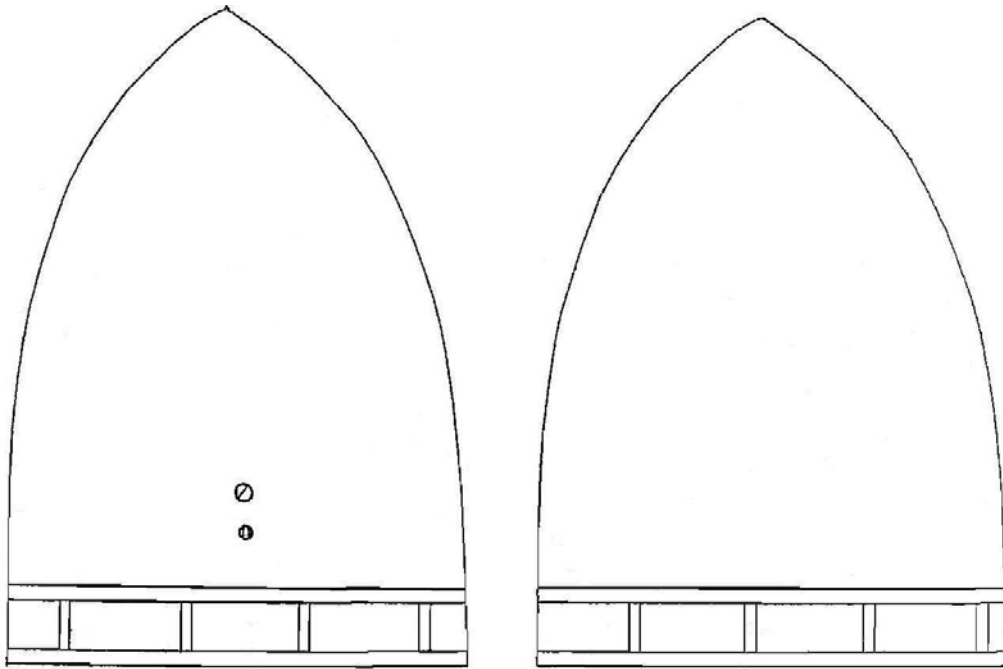
SUCTION FACE

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# CAP

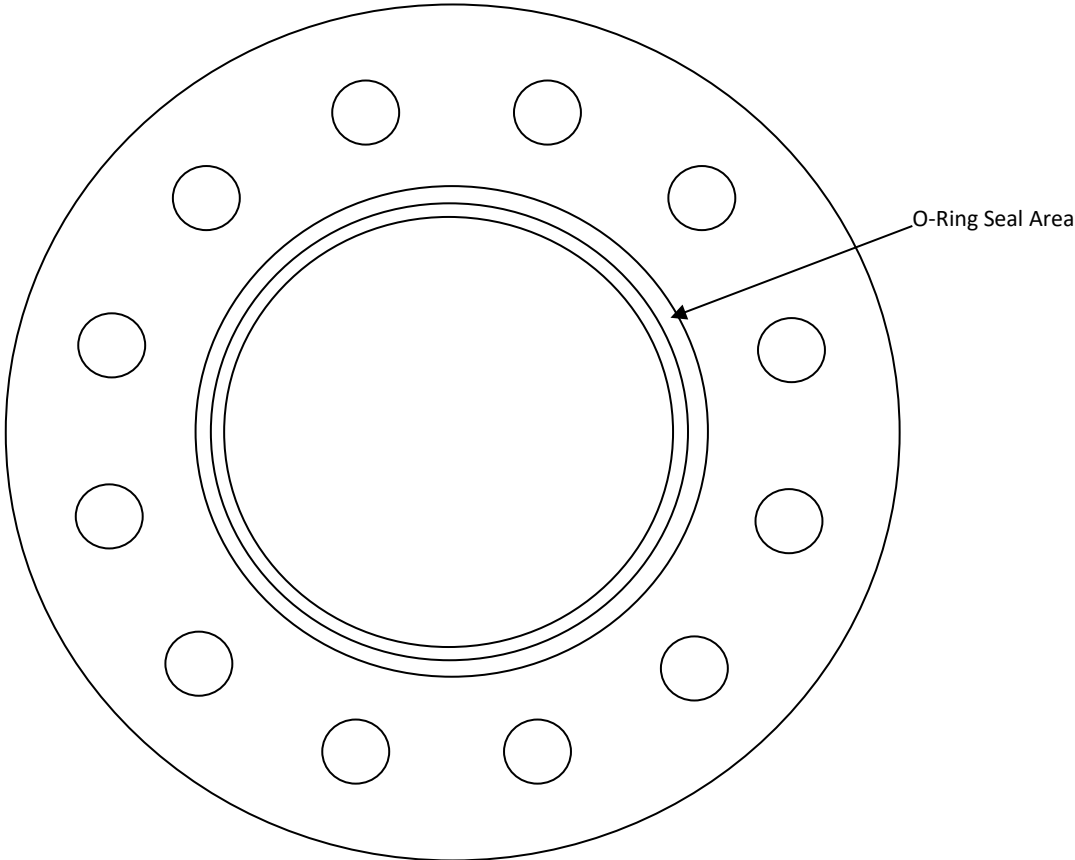


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# CAP COVER PLATES



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