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CANCELLED 5/96		SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 LEXINGTON AVENUE NEW YORK 17, N.Y.		AERONAUTICAL RECOMMENDED PRACTICE		ARP 265A	
AIRFOIL SHAPES — DIMENSIONING OF TURBINE ENGINE						Issued 2-1-52 Revised 2-1-59	
1. PURPOSE THIS AERONAUTICAL RECOMMENDED PRACTICE PROVIDES A STANDARD METHOD FOR LOCATING AND DIMENSIONING THE AIRFOIL PORTIONS OF PARTS SUCH AS BLADES, AND VANES. 2. GENERAL THIS METHOD WILL APPLY TO BLADES, OR VANES WITH OR WITHOUT A BASE. THE FORMS OF ATTACHMENT ARE VARIED; THEREFORE, THE BLADE BASES SHOWN IN THE FOLLOWING FIGURES ARE FOR ILLUSTRATION ONLY. ALL DIMENSIONS AND NOTES SHOWN PERTAINING TO THE COMMON FUNCTIONAL POINT, LINE OR PLANE ARE CONSIDERED TO BE APPLIED TO A DATUM, ON OR OFF THE PART, IRRESPECTIVE OF THE FORM OF ATTACHMENT. 2.1 THE AIRFOIL SHAPE OF SUCH PARTS SHALL BE DEFINED BY MEANS OF SECTIONS CHOSEN ENTIRELY (EXCEPT REFERENCE SECTIONS) FROM WITHIN THE AIRFOIL PORTION. 2.2 THE "TYPICAL AIRFOIL SECTION" SHALL BE DEFINED BY A SERIES OF NUMBERED STATIONS ESTABLISHED BY RECTANGULAR COORDINATES. THE STATIONS SHALL BE NUMBERED CONSECUTIVELY IN A CLOCKWISE DIRECTION FROM THE LEADING EDGE. THESE NUMBERS MAY BE SHOWN ON THE TYPICAL AIRFOIL SECTION FOR CONVENIENCE. THE SPECIFIC TERMINOLOGY SHOWN SHALL BE FOLLOWED, WHERE APPLICABLE, TO ASSURE DRAWING CONSISTENCY. NEGATIVE LINEAR OR ANGULAR DIMENSIONS ARE NOT RECOMMENDED. WHEN ADDITIONAL SECTIONS NOT WHOLLY WITHIN THE AIRFOIL PORTION ARE DEEMED NECESSARY, THEY MAY BE DEFINED AND SHALL BE MARKED REFERENCE. 2.3 IT IS RECOMMENDED THAT MANUFACTURERS BE SUPPLIED WITH METAL, GLASS, OR EQUIVALENT LAYOUT MASTERS, OR WITH AIRFOIL DATA IN COORDINATE FORM OR BOTH. IF BOTH ARE SUPPLIED, ONE SHOULD BE INDICATED AS TAKING PRECEDENCE. 3. TERMINOLOGY BASE — A PORTION OF THE PART WHICH IS USED FOR ATTACHMENT. (FORMERLY, FOOTING, ROOT, FIR TREE, DOVETAIL, TANG). ANGLE DATUM PLANE — A DATUM PLANE TO BE USED FOR CONTROLLING THE ANGULAR RELATION OF THE VARIOUS AIRFOIL SECTIONS. BASE CENTER PLANE — A PLANE PASSING THRU THE CENTER OF THE BASE WHICH MAY, OR MAY NOT, COINCIDE WITH THE ANGLE DATUM PLANE. STACKING POINT — THE POINT FOR EACH AIRFOIL SECTION ABOUT WHICH THE SECTION IS TWISTED. THIS POINT MAY COINCIDE WITH THE C. G. STACKING AXIS — A STRAIGHT LINE PASSING THRU THE BASIC STACKING POINT OF EACH SECTION. (FORMERLY, AXIS OF TWIST). TWIST ANGLE — THE ANGLE BETWEEN THE SECTION DATUM LINE AND THE ANGLE DATUM PLANE (OR BASE CENTER PLANE WHERE THESE PLANES COINCIDE). SECTION DATUM LINE — A LINE IN THE PLANE OF THE SECTION TO WHICH THE COORDINATE SYSTEM IS APPLIED. (THIS DATUM LINE IS GENERALLY PARALLEL TO THE CHORD LINE OF THE SECTION). DISPLACEMENT — VARIATION OF AIRFOIL SECTIONS FROM BASIC LOCATIONS. (INCLUDES BOW, LEAN, TILT AND CENTRALITY).							

4. TYPICAL DRAWING. RECOMMENDED DRAWING AND DIMENSIONING PRACTICES FOR THE AIRFOIL PORTION OF A BLADE ARE SHOWN IN FIGURE 1.

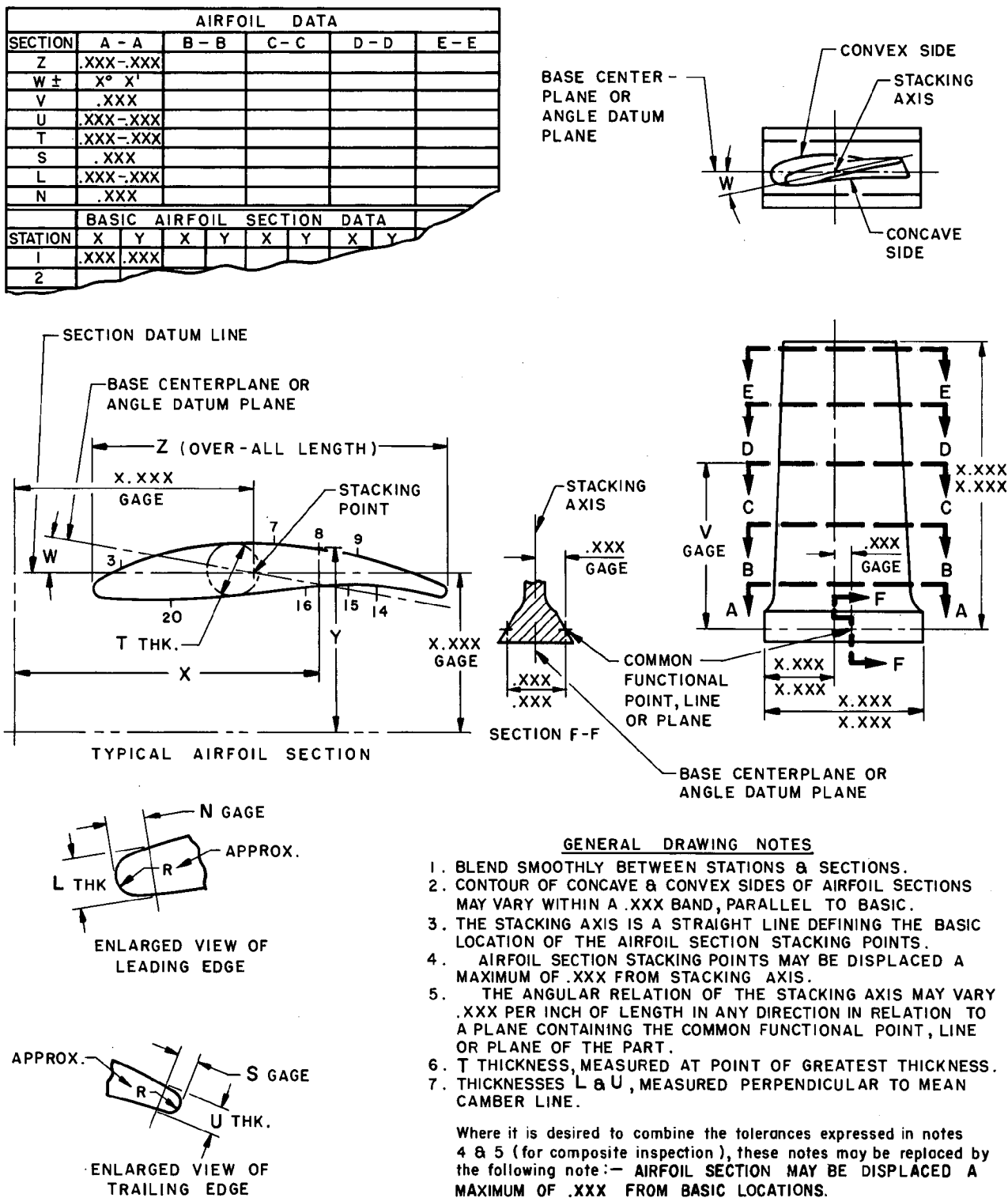


FIGURE 1