PERFORMANCE CURVES

for Types HL-HM-HH, HE and HF Hydro-Lines

1. The curve sheets in Vertical Turbine Section 140 show bowl performance with standard enameled bowls and bronze or CI impellers.

   NPSH required is referred to impeller eye.

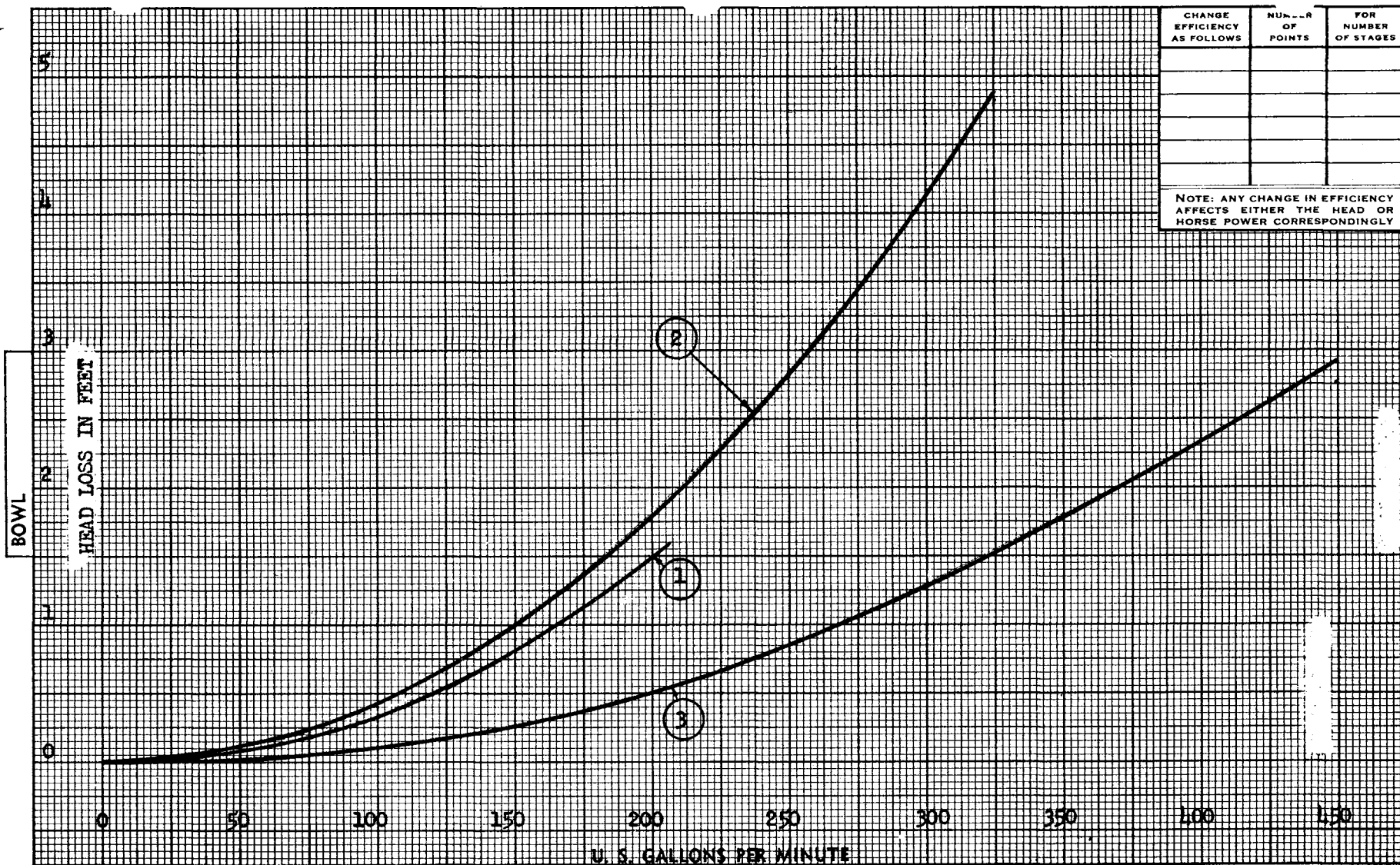2. When high pressure (deep set) bowls are used reduce curve efficiency as follows:

6LB	3%
7LB	3
8LB	3
9LA	3
10MA	4
12LB	3
12MB	4

3. Head and Barrel Losses

   Discharge head losses may be estimated at 1.5 times discharge velocity head $(1.5 \times \frac{V^2}{2g})$. This loss need not be included unless it exceeds 2% of total head.

   Suction head-and-barrel losses may be estimated from the loss-vs-capacity curves which follow. These losses affect the NPSH required at the pump suction flange. As discussed on page 5 (NPSH calculations), this loss may be omitted under certain conditions.

4. For performance with other bowl and impeller materials, refer to LA Factory.

CHANGE EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	FOR NUMBER OF STAGES

NOTE: ANY CHANGE IN EFFICIENCY AFFECTS EITHER THE HEAD OR HORSE POWER CORRESPONDINGLY

BOWL

HEAD LOSS IN FEET

U. S. GALLONS PER MINUTE

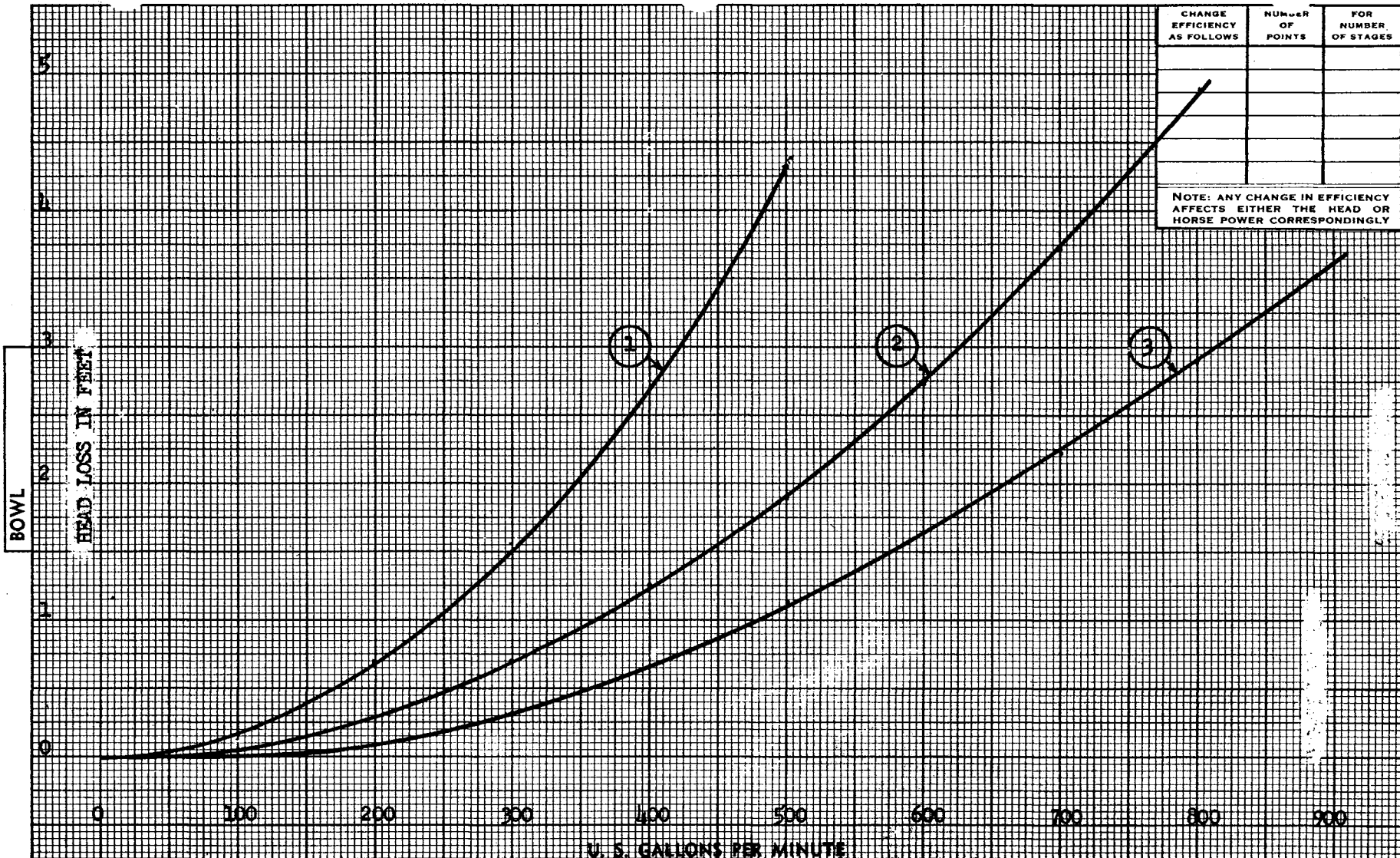| HYDRAULIC PERFORMANCE	CURVE NO.	HYDROLINE	TAKEN FROM
GUARANTEED AT THE DESIGNATED POINT ONLY AND IS CONTINGENT ON WELL PROPERLY FURNISHING PUMP WITH NON-AERATED OR NON-GASEOUS WATER FREE FROM ABRASIVES. PUMP BOWLS MUST BE PROPERLY ADJUSTED FOR THE HEAD AT WHICH THEY OPERATE AND MUST BE SUBMERGED.	1	4LO – 2 x 3 x 8	
	2	6LB – 2 x 3 x 8	
	3	7LB – 3 x 4 x 10	

PEERLESS PUMP Peerless Pump Company
Indianapolis, IN 46207-7025

Head loss between suction flange and bowl assembly suction manifold in hydrolines.

SHEET NO. 2826482

BOWL

HEAD LOSS IN FEET

U. S. GALLONS PER MINUTE

CHANGE EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	FOR NUMBER OF STAGES

NOTE: ANY CHANGE IN EFFICIENCY AFFECTS EITHER THE HEAD OR HORSE POWER CORRESPONDINGLY

VERTICAL PROCESS PUMPS

HYDRAULIC PERFORMANCE	CURVE NO.	HYDROLINE	TAKEN FROM		
GUARANTEED AT THE DESIGNATED POINT ONLY AND IS CONTINGENT ON WELL PROPERLY FURNISHING PUMP WITH NON-AERATED OR NON-GASEOUS WATER FREE FROM ABRASIVES. PUMP BOWLS MUST BE PROPERLY ADJUSTED FOR THE HEAD AT WHICH THEY OPERATE AND MUST BE SUBMERGED.	1	8LB – 3 x 4 x 10			
	2	8LB – 4 x 6 x 10			
	3	9LA – 4 x 6 12			

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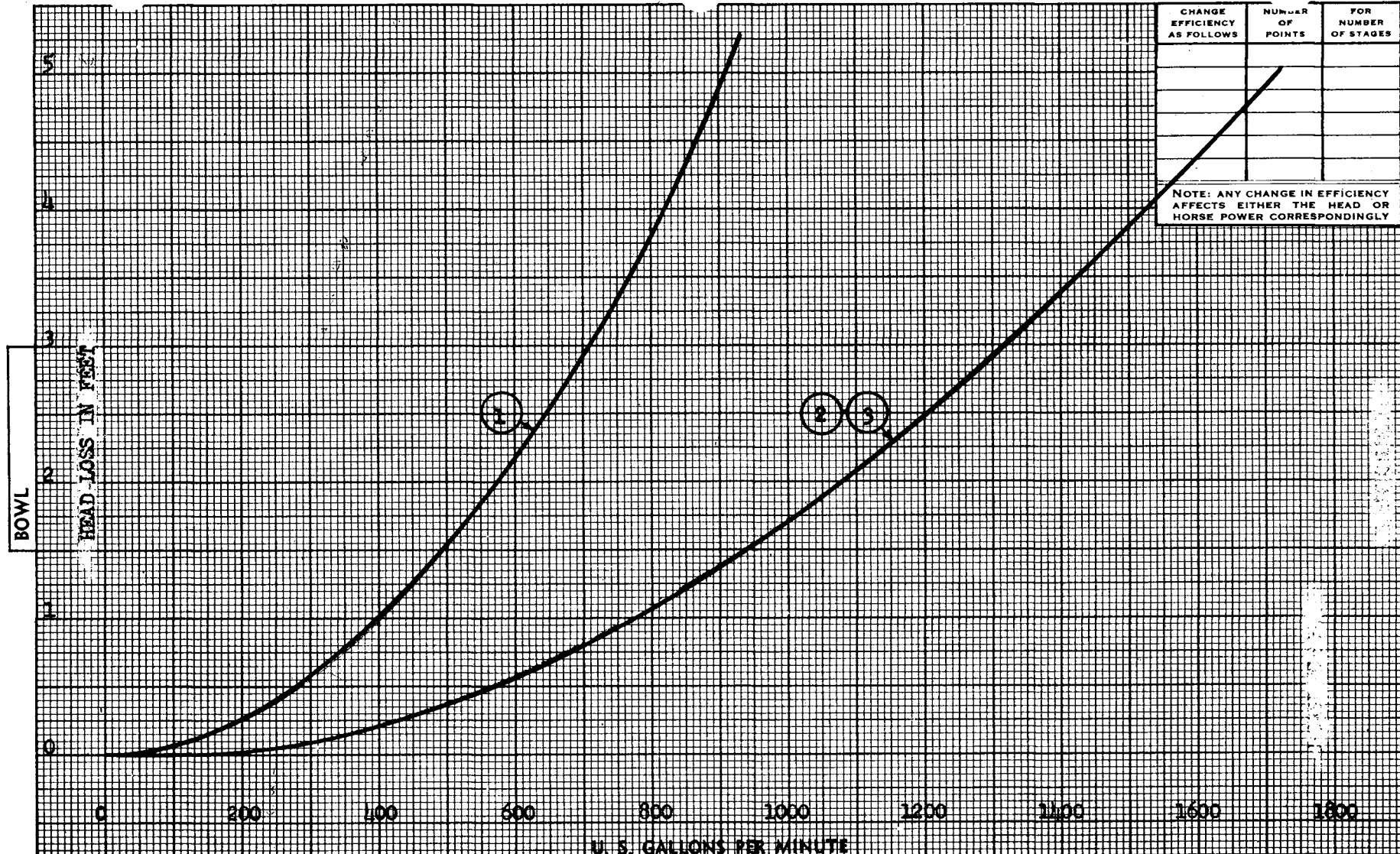Head loss between suction flange and bowl assembly suction manifold in hydrolines.

SHEET NO. 2826483

CHANGE EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	FOR NUMBER OF STAGES

NOTE: ANY CHANGE IN EFFICIENCY AFFECTS EITHER THE HEAD OR HORSE POWER CORRESPONDINGLY

BOWL

HEAD LOSS IN FEET

U. S. GALLONS PER MINUTE

HYDRAULIC PERFORMANCE	CURVE NO.	HYDROLINE		TAKEN FROM
GUARANTEED AT THE DESIGNATED POINT ONLY AND IS CONTINGENT ON WELL PROPERLY FURNISHING PUMP WITH NON-AERATED OR NON-GASEOUS WATER FREE FROM ABRASIVES. PUMP BOWLS MUST BE PROPERLY ADJUSTED FOR THE HEAD AT WHICH THEY OPERATE AND MUST BE SUBMERGED.	1	10MA	4 x 6 x 12	
	2	12LB	6 x 8 x 16	
	3	12MB	6 x 8 x 16	

PEERLESS PUMP

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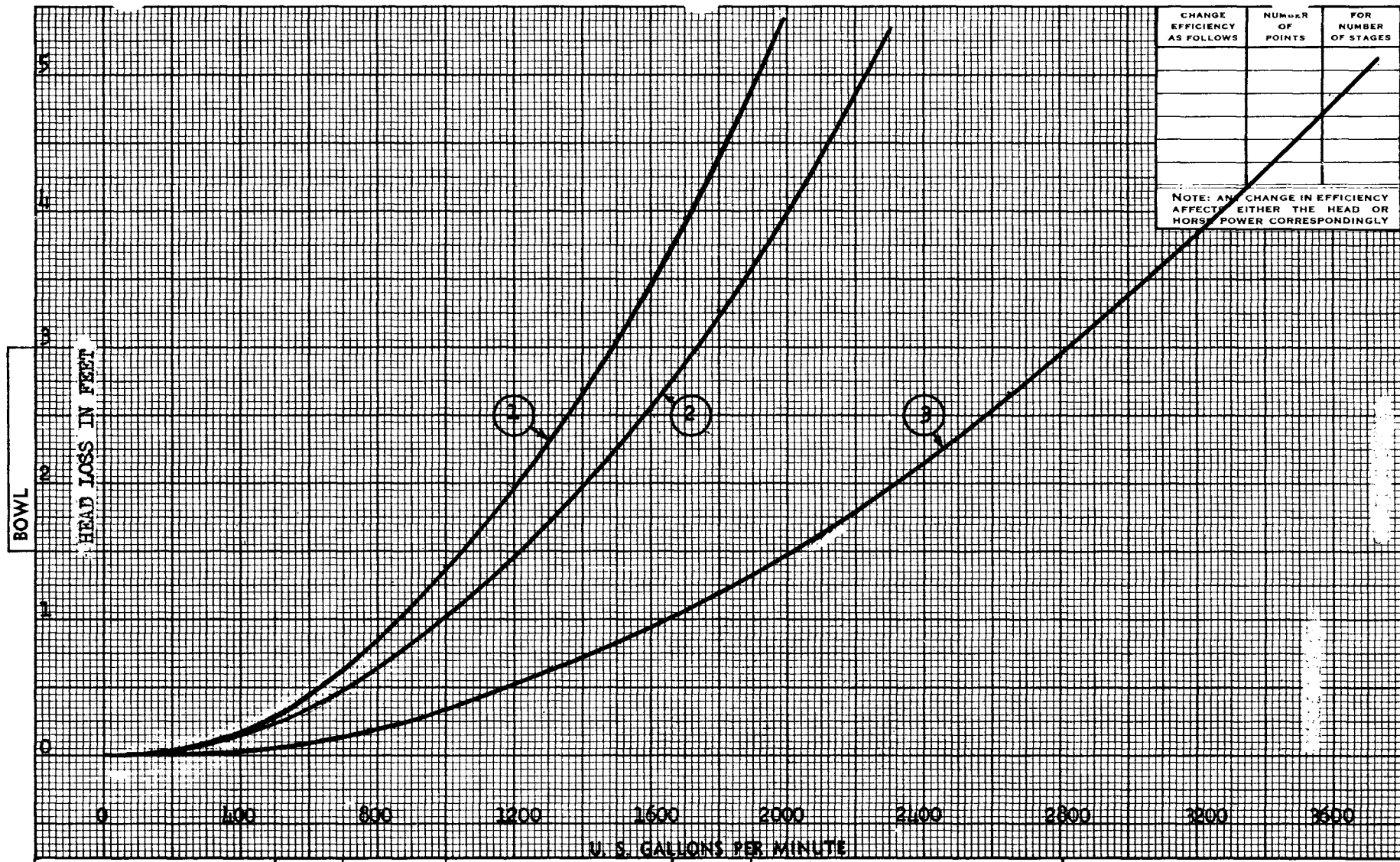Head loss between suction flange and bowl assembly suction manifold in hydrolines.

SHEET NO. 2826484

VERTICAL PROCESS PUMPS

BOWL

HEAD LOSS IN FEET

U. S. GALLONS PER MINUTE

CHANGE EFFICIENCY AS FOLLOWS	NUMBER OF POINTS	FOR NUMBER OF STAGES

NOTE: ANY CHANGE IN EFFICIENCY AFFECTS EITHER THE HEAD OR HORSE POWER CORRESPONDINGLY

HYDRAULIC PERFORMANCE	CURVE NO.	HYDROLINE		TAKEN FROM
GUARANTEED AT THE DESIGNATED POINT ONLY AND IS CONTINGENT ON WELL PROPERLY FURNISHING PUMP WITH NON-AERATED OR NON-GASEOUS WATER FREE FROM AB-RASIVES. PUMP BOWLS MUST BE PROPERLY ADJUSTED FOR THE HEAD AT WHICH THEY OPERATE AND MUST BE SUBMERGED.	1	14LC	6 x 8 x 18	
	2	14MC	8 x 10 x 18	
	3	14HXB	10 x 12 x 20	

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Head loss between suction flange and bowl assembly suction manifold in hydrolines.

SHEET NO. 2826485