ISO 13709 2nd edition (API 610 11th)
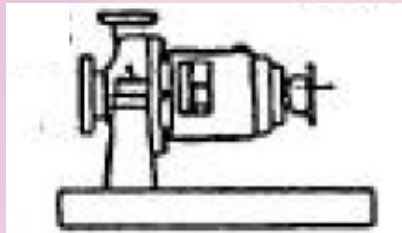
1. 9.1.1.3 (P.87) Horizontal single stage overhung pump   OH2 Shaft stiffness

Revised content   This paragraph was newly added.

If specified, for horizontal single stage overhung pumps, type OH2, shaft stiffness shall be in accordance with K.1. Annex K.1 specifies the relationship between size factor (K_t) and shaft flexibility index (I_{SF}) with a figure.
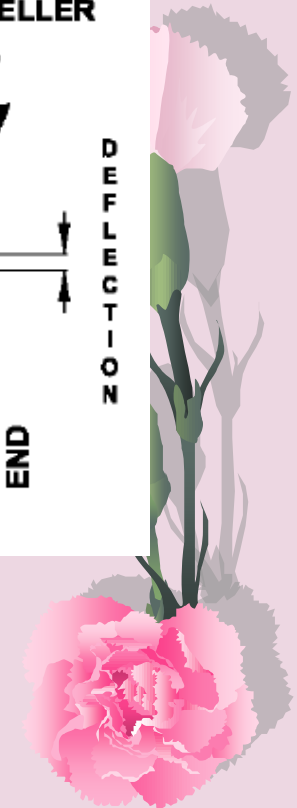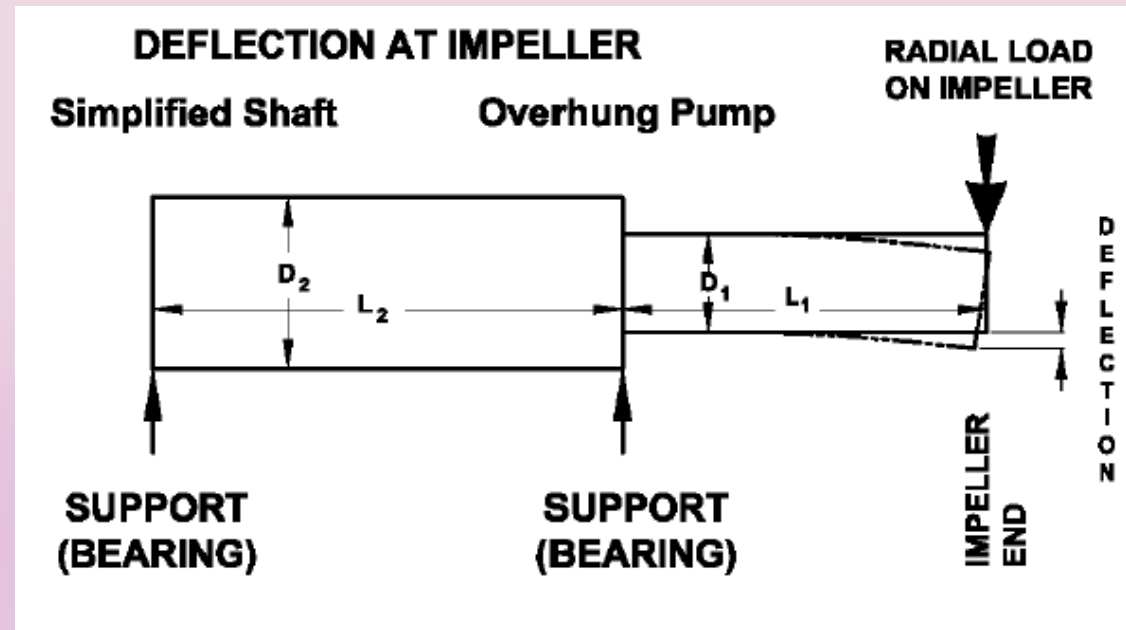
OH2

$$I_{SF} = L_1^3/D_1^4$$

$$K_t = (Q\ H)/N$$

DEFLECTION AT IMPELLER

Simplified Shaft   Overhung Pump   RADIAL LOAD ON IMPELLER

D_2 L_2 D_1 L_1

SUPPORT (BEARING)   SUPPORT (BEARING)   IMPELLER END   DEFLECTION

Q : flow at BEP of maximum impeller diameter (m³/h)
H : total head (m)
N : pump speed (min⁻¹)

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