

**WATER CONTROL GATES**

1. **APPLICABILITY**

Construction Specification 71 is applicable to the installation of gates for the purpose of water control, including slide gates, flap gates and radial gates.

2. **MATERIAL SPECIFICATIONS**

Material Specifications 571, 572, and 573 are complementary to Construction Specification 71. Table A-71 is a guide to selection of metal water control gates. When fabricated wooden gates are required for special applications, a material specification tailored to the specific job is usually more appropriate.

3. **ITEMS TO BE INCLUDED IN CONTRACT SPECIFICATIONS AND DRAWINGS**

- a. Plans, elevations and sections showing location of gates and type and size of openings.
- b. Types of gates and applicable material specifications.
- c. Class of gate (seating and unseating heads expressed as a numerical symbol). Example: Class 40-10 denotes a seating head of 40 feet and an unseating head of 10 feet.
- d. Type of frame (flat, spigot, flange, flange with spigot) and details of the method of attaching the gate to the structure or pipe. Include thimble details, when required, together with designation of type of thimble (Types: E, F, C, L, Flange and Bell, or Flange and Flare).
- e. Special gate requirements (self-contained, nonrising stem, flush-bottom opening, etc.); include material requirements for fabricated metal gates if other than steel is required.
- f. Type and capacity of gate stems, hoists, lifts, stem guides, stem housings, couplings, sleeves and other appurtenances.
- g. Paint systems to be used in shop and field painting. (Refer to Construction Specification 82, Cleaning and Painting Metalwork).
- h. Special gate operating requirements, particularly if the gate is intended to operate in other than the fully open or fully closed position. Example: Gate will be required to operate in a partially open position under a full head.

4. **DISCUSSION OF METHODS**

No alternative methods are included.

TABLE A-71

GUIDE TO SELECTION OF METAL WATER CONTROL GATES

<u>Types of Gates Satisfactory for Exposure Condition</u>					
Type of Gate	Application	Frequency of Use	Fresh Water or Slight Pollution	Moderate Pollution (Domestic & Agricultural Sewage, & Industrial Waste)	Extreme Pollution, Sea Water, Brackish Water
Slide	Drainage gates; Canal headgates	Frequent Infrequent	MLS-1&2, MMS-1 MMS-1, MHS-1	MHS-2	MHS-3
	Sediment pool drainage gate	Infrequent	MMS-2, MHS-1	MHS-2	MHS-3
	Reservoir water supply	Frequent	MMS-2, MHS-1	MHS-2	MHS-3
	Intake gates	Infrequent	MHS-1, MHS-2	MHS-3	MHS-3
Flap	Accessible gravity outlets		MMF-1, MLF-1	MHF-2	MHF-3
	Inaccessible gravity outlets		MHF-1, MMF-1	MHF-2	MHF-3
	Pump outlets, not subject to slamming		MHF-1, MMF-1	MHF-2	MHF-3
	Pump outlets, subject to slamming		MHF-1R	MHF-2R	MHF-3R