Engineering Data Downloading

1. Introduction

The information intends to offer engineering data which may help in planning, designing, construction at workshops and sites, operation, maintenance etc. of super large torsion type gates when they are used as the primary closure system for a surge barrier.

2. Gate types of a super large torsion type gate

Table 2.-1 shows gate operation directions and gate type names.

Column ①: It shows gate operation directions. Parallel movements are classified into flow direction, horizontal direction which is at right angles to the flow direction and vertical direction which is at right angles to other directions and rotational movements are classified into around flow axis, around horizontal axis which is at right angles to the flow axis and around vertical axis which is at right angles to other axis.

Column ②: It shows possibility of a super large torsion type gate. The line 1 and the line 4 are impossible that is because a gate of the line 1 is very difficult to operate and gate operation around flow axis of the line 4 is not realistic for a gate having a few hundred meters width.

Column ③: It shows gate type names of possible super large torsion type gates. The possible types are the flap type, the rolling type, the swing type and the emerging type.

Table 2.-1 Gate operation directions and names of a gate type

No.	①Gate Operation		② Super large torsion gate		③Names of a gate type
	Movement	Direction	Possibility	Reason	
1	Parallel movement	Flow direction	×	Not operable	−
2		Horizontal	○		Rolling type
3		Vertical	○		Emerging type
4	Rotational movement	Flow axis	×	Not realistic	−
5		Horizontal axis	○		Flap type
6		Vertical axis	○		Swing type

3. Names of the engineering data

Table 3.-1 shows file names and names of the offered engineering data.

First column: It shows gate types. They are flap, rolling, swing and emerging as shown on the column ③ of Table 2.-1.

Second column: It shows the data classification. Classification basis are engineering report,

technical proposal, technical subject and patentability. All technical subjects which directly concern the torsion type structure are included in the rolling type.

Third column: It shows file names. Downloading of the engineering data will be made according to the file names.

Forth column: It shows the engineering data names.

The super large torsion type gate could be in flap type, rolling type, swing type or emerging type and the biggest trouble of them may be sediment, which will be resolved according to existing technologies.

Table 3.-1 File names and names of the offered engineering data

Gate type	Data classification	File name[2]	Titles of engineering data
Flap	Engineering report	①FlapType	Torsion Type Flap Gate for Docks
Rolling	Technical proposal	②RollingType	Torsion or Sector? (Evaluation of Structural types)
	Technical subject	③DoctorThesisExtract	3．1 Structural analysis of torsion type gates (Doctor thesis abstract)
		④JSDEPaper	Structural Analysis of Torsion Type Gate (JSDE[1] paper)
		⑤WarrpingMitigation	Mitigation of Warping & Optimum Design
		⑥SuperiorityOfTorsion	Why is Torsion Type Superior to Bending Type?
		⑦RollerRunningOff	Running of a Roller Off its Rail
	Patentability	⑧PatentabilityRolling	Specification & Drawings for International Preliminary Search Report on Patentability
Swing	Technical proposal	⑨SwingType	Swing Type
	Technical subject	⑩GateInclination	Inclination Angle of The Gate Body
		⑪GateImpact	Impact Power of The Gate Body
	Patentability	⑫PatentabilitySwing	Specification & Drawings for International Search Report on Patentability
Emerging	Technical proposal	⑬EmergingType	Emerging Type
	Patentability	⑭PatentabilityEmerging	Specification & Drawings for International Search Report on Patentability

Remarks: 1.JSDE: Japan Society of Dam Engineers

2.Numbers on file names are common to the Japanese version

4． Downloading of the engineering data

The engineering data will be downloaded on a browser screen of Chrome etc. according to a click file names shown below. Numbers on the file names are common to Japanese version. The number ⑮ is a content of this page.

①FlapType
②RollingType
③DoctorThesisExtract
④JSDEPaper
⑤WarpingMitigation
⑥SuperiorityOfTorsion
⑦RollerRunningOff
⑧PatentabilityRolling
⑨SwingType
⑩GateInclination
⑪GateImpact
⑫PatentabilitySwing
⑬EmargingType
⑭PatentabilityEmerging
⑮EngineeringData