WADISO

Wadiso EPANETServer extension for fire flow risk analysis

GLS has developed and implemented a multithreaded client-server software application based on the latest open-source EPANET 2.2 hydraulic analysis engine which now enables city-wide fire flow risk analyses on a property-by-property basis in reasonable time.

Features

- Property fire risk categorization
- Hydrant correlation (direct and system traversal options)
- Quick option to add dummy hydrants to selected nodes
- Identification of unique fire events
- Choice between Demand Driven and Pressure Driven as analysis type
- Option to run server application on local machine
- Report hydrant availability and pressure and flow conditions for fire event
- Heatmap view to identify critical areas and allows for rational approach to decide where to focus on network augmentation, or alternatively provide onsite fire fighting capabilities
- Ease of setup via Wadiso front-end allows for quick creation of various fire flow risk analysis scenarios to compare severity of fire category assignment or augmentation options



Fire Flow Areas					
Properties		~			
Fire Flow Categorie	s				
FireFlowRiskCatego	ories	~			
Create Blank Categories Table Add Link Ignore Field to					
Use the traver Using both will als	sal method 🗹 Use o create a combined tab	e the direct method ble.			
		Create Fire Scenarios			
Hydrant_Fire_Co	Ontion 1				
Scenario Name:	Option_1				
Model Name:	FireRisk_Demo.wlz				
Analysis Mode:	Local	~			
Analysis Setting	s				
Convergence Criteria:		0.01			
Maximum Iterations:		1000			
Perform F	PDA Analysis (Disable fo	or DDA)			
Min Allowable Head:		10			
Max Head Be	efore Flow Reduction:	30			
Export model to	INP (File will be created	d if it does not exist). Analyse			
		Close			

Fire Flow Simulation on Server









For more information, please contact us +27 21 880 0388, software@gls.co.za GLS Consulting, Stellenbosch, 7600, South Africa www.gls.co.za

Watch the YouTube video here:

WADISO

Wadiso EPANETServer extension for network redundancy analysis

Many complex networks that were initially designed with different degrees of redundancy, both topological (inter-connected loops) and energy based (larger diameters than required), have been modified following city growth, re-zoning and pressure management initiatives without a systematic approach to ensure reliability and robustness remain intact.

GLS has developed and implemented a multi-threaded client-server software application based on the latest open-source EPANET 2.2 hydraulic analysis engine which enables a full network redundancy analysis on a per pipe basis in reasonable time.

Features

- Option to run on all pipes, selection of pipes, or flagged pipes (isolation valves and CVs excluded)
- Option to run server application on local machine
- Report "lost" flow for each link if demand at downstream end not attainable, along with EPANET status and available pressure
- Import results to model for visual representation
- Identify points of failure to be rectified to ensure sustained supply of water
- Critical information for pipe replacement or network augmentation planning
- Ease of setup via Wadiso front-end allows for quick creation of multiple redundancy scenarios



Server Redundancy Analysis					
Analysis Mode:					
Local					
Model Name:					
NetworkRedundancy_De	mo.wlz				
Scenario Name:					
Option_1					
Analysis Settings	493				
Minimum Pressure:	0				
Convergence:	0.01				
Maximum Iterations:	100				
Export INP File		_			
			Analyse	Cancel	







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