



THE FALLING WALL

MECHANISM : HERON'S FOUNTAIN - COMMUNICATING VESSELS

HERON'S FOUNTAIN IS A MECHANISM BASED ON THE AIR COMPRESSION AND THE INCOMPRESSIBILITY OF THE WATER. IN THE FIRST STAGE, THE WATER COMES DOWN IN A DUCT AND PRESSING THE AIR WHILE IN THE SECOND ONE IS THE AIR WHO PRESSING WATER WHICH IS OBLIGATED TO MOVE. GREEKS USED THIS ANCIENT MECHANISM, INFACT THEY COULD OPEN/CLOSE THE TEMPLE DOOR WITHOUT USING HUMAN FORCES.

THE SYSTEM IS COMPOSED BY SOME WATER TRANSITION STEPS. WATER MOVE FROM TANK "A", THE STARTING POINT, INTO THE CONTAINER "B" THROUGH THE DUCT "1" AND IT PRESSING AIR WHO COERCING IT TO COME UP INTO "C" RECIPIENT. IN THIS THIRD TANK THE AIR WHICH ARRIVES FROM "B" WITH DUCT "2"; PRESSING THE WATER WHICH, BEING INCOMPRESSIBLE HAS THE ONLY POSSIBLE CONSEQUENCE TO MOVE THROUGH DUCT "3" AT THE BEGINNING OF THE PROCESS.

THE PROJECT SCHEDULES A MODIFICATION TO THIS ANCIENT MECHANISM WHICH CONSISTS IN THE ADDITION OF THE COMMUNICATING VESSELS THEORY. WHEN THE LIQUID SETTLES, IT BALANCES OUT TO THE SAME LEVEL IN ALL THE CONTAINERS, REGARDLESS OF THE SHAPE AND THE VOLUME OF THOSE AND CREATING A UNIQUE EQUIPOTENTIAL SURFACE. THE HERON'S FOUNTAIN MECHANISM BECAME PERPETUAL THANKS TO THE NECESSITY TO HAVE A CONSTANT SITUATION IN B" B" AND "C" TANK.

WITH THE COMBINATION BETWEEN THE HERON'S FOUNTAIN MECHANISM WITH COMMUNICATING VESSELS THEORY WE CAN HAVE THE PROJECT PROPOSAL. FOUR PERPETUAL FOUNTAINS THAT CAN WORKS WITHOUT ANY ADDITION OF EXTERIOR ENERGY. THE FALLING WALL ADVANCES THE IDEA OF A BIG FALL IN AN URBAN CONTEST.

TO PRODUCE ENERGY THE PROJECT PROVIDES TO USING TURBINES, AT THE END OF THE FOUR DIFFERENT BIG FALL. WE COULD ALSO PRODUCE ENERGY, THANKS TO THE HIGH FALLING WALLS, WATER COULD HAVE A CINETIC ENERGY WHICH TURNS ON PELTON TURBINES AND WHILE THEY MOVE, THEY PRODUCE ENERGY IN RELATION TO THE FLOW RATE OF WATER COLLECTED AND CARRY ON BY HERON'S FOUNTAIN. PELTON TURBINES SUITABLE FOR SYSTEMS WITH JUMP FROM 20M UP A 180/200M WITH CAPACITIES FROM 0.5 L / S TO 100 L / S, CAN BE HORIZONTAL OR VERTICAL AXIS.

CHARACTERISTICS

CONSIDERING THE NAME OF THE PROJECT, THE HIGH OF THE BIGGEST FALL IS 120 MT FOR HAVING THE MAXIMUM WATER SPEED WHILE THE BASE DIMENSIONS ARE MORE OR LESS 30 MT X 30 MT. THE PROJECT IS CHARACTERIZED BY OTHER THREE BIG FALLS, WHOSE BASE DIMENSIONS ARE 20 MT X 20 MT AND THE HIGHS ARE 100 MT, 80 MT AND 40 MT.

REGARDING THE MATERIALS, THE PROJECT OF THE FOUR BIG WALLS USED STEEL AND GLASS. WE PROJECTED THE BIGGEST FALL WITH A STEEL STRUCTURE WITH DIFFERENT FLOORS CONNECTED WITH TWO DIFFERENT LIFTS AND STAIRCASE. THERE IS ALSO AN OBSERVATION POINT AT 120 MT HIGH. ALL THE STRUCTURE PROVIDED TO PUT BRANCHES IN BOTH DIRECTION FOR HAVING A SOLID STRUCTURE BECAUSE THE RELEVANT HIGH PROJECT.

