

The Mooring Tower at the Royal Airship Works

Major Scott's invention of the mooring tower, shortly after the First World War, paved the way for the giant commercial airships Britain planned to build. As airships grew to the size of R.101, ground landing became more difficult, although Germany always used ground landings for its zeppelins. Scott's mooring tower solved all of the problems of landing an airship. First, it reduced the number of people required to land the airship to around twenty. Second, it enable the airship to land or depart in almost any weather, thus eliminating the need for expensive revolving sheds. Third, the tower provided an easy way to supply the airship with water, fuel, and gas. The Cardington mooring tower could withstand a thirty-ton pull at its top. Each of its four legs was embedded in a piece of concrete about twelve feet square that extended six feet into the ground. This anchored the tower with a force of sixty tons. At the base were three large winches, one for each of the cables used to haul in the airship. With drums five feet in diameter, oil-fired and steam-driven, they could pull in a fifteen-ton load at fifty feet per minute. The ground crew controlled them from the top of the tower, but there were duplicate controls at the base in case of failure at the top. Up the center core of the tower ran pipes up to a foot in diameter to deliver hydrogen, water, and fuel. Huge pumps at the base could lift 5,000 gallons of water per hour and pump fuel at 2,000 gallons per minute from the 10,000-gallon tank buried in the ground near the tower. At the tower's top a circular dome-covered steel turret, twenty-five feet in diameter and a little over twelve feet high enclosed an arm, which attached to the airship. The arm telescoped, from sixteen to twenty-four feet in length, could swing thirty degrees from vertical and rotate a full 360 degrees around the tower. This motion allowed the ground crew to position the arm as the winches hauled in the airship. The ship could spin around the arm's vertical axis, enabling the ship to ride with the wind.

CHAPTER ONE

