

DISPLACEMENT MONITORING SYSTEM FOR TOWER AND MONITORING METHOD THEREOF

ABSTRACT OF THE DISCLOSURE

5 The present invention provides a displacement monitoring system for a tower,
the displacement monitoring system includes a tower displacement monitoring
terminal and an underground displacement monitoring terminal electrically
connected to the tower displacement monitoring terminal, the tower displacement
monitoring terminal is arranged on the tower and includes a main control module,
10 an overground tower displacement sensor, a power supply module and a
communication module, wherein the overground tower displacement sensor, the
power supply module and the communication module are electrically connected to
the main control module respectively, the underground displacement monitoring
terminal is arranged on an underground bedrock and includes a controlling module
15 and an underground displacement sensor electrically connected to the controlling
module. According the technical solution, displacement sensors are used to monitor
the displacement values of the tower and the bedrock respectively, then the
displacement value of the tower relative to the bedrock is computed based on the
displacement values of the tower and the bedrock, this technical solution
20 overcomes the one-sidedness of only monitoring the incline angle of the tower, and
is a more comprehensive monitoring solution. Thus the displacement value of the
tower can be accurately monitored on line, the actual state of the tower can be
monitored, and therefore it is beneficial for further plan and build of national grid.

25 Fig. 2