### (12) PATENT APPLICATION PUBLICATION

(21) Application No.202041055058 A

(22) Date of filing of Application :17/12/2020

(43) Publication Date : 22/01/2021

# (54) Title of the invention : Effects of the wind on the High Level Water Collecting Wet CoolingTower

<ul> <li>(51) International classification</li> <li>(31) Priority Document No</li> <li>(32) Priority Date</li> <li>(33) Name of priority country</li> <li>(33) Name of priority country</li> <li>(86) International Application No</li> <li>(87) International Publication No</li> <li>(87) International Publication No</li> <li>(61) Patent of Addition to Application Number</li> <li>Filing Date</li> <li>(62) Divisional to Application Number</li> <li>Filing Date</li> <li>(63) Divisional to Application Number</li> <li>(64) Patent</li> <li>(65) Divisional to Application Number</li> <li>(66) Divisional to Application Number</li> <li>(67) Divisional to Application Number</li> <li>(68) Divisional to Application Number</li> <li>(61) Patent</li> <li>(62) Divisional to Application Number</li> <li>(63) Divisional to Application Number</li> <li>(64) Divisional to Application Number</li> <li>(7) Division</li></ul>	28C 1/14 IA IA CT// 1/01/1900 JA A A A A	<ul> <li>(71)Name of Applicant :</li> <li>(1)Dr.Ramu Inala Address of Applicant : Associate Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202 Andhra Pradesh India</li> <li>2)Mr.Vinod M</li> <li>3)Mr.Raghuraman M</li> <li>4)Mr.Srinivas P</li> <li>5)Mr.Mahesh Chakravarthi V</li> <li>6)Mr.Bhanuteja Krapa</li> <li>7)Dr.Venu Mangam</li> <li>(72)Name of Inventor :</li> <li>1)Dr.Ramu Inala</li> <li>2)Mr.Vinod M</li> <li>3)Mr.Raghuraman M</li> <li>4)Mr.Srinivas P</li> <li>5)Mr.Mahesh Chakravarthi V</li> <li>6)Mr.Bhanuteja Krapa</li> <li>7)Dr.Venu Mangam</li> <li>(72)Name of Inventor :</li> <li>1)Dr.Ramu Inala</li> <li>2)Mr.Vinod M</li> <li>3)Mr.Raghuraman M</li> <li>4)Mr.Srinivas P</li> <li>5)Mr.Mahesh Chakravarthi V</li> <li>6)Mr.Bhanuteja Krapa</li> </ul>
		5)Mr.Mahesh Chakravarthi V 6)Mr.Bhanuteja Krapa 7)Dr.Venu Mangam

# (57) Abstract :

(19) INDIA

The Cooling Tower is a device used to wipe out the waste heat which is generated to the atmosphere through the cooling of a water stream to a lower temperature. The Water collecting Wet Cooling Towers uses evaporation to transform the heat from the water stream to the Air steam to the atmosphere, Saturated Air is discharged into the atmosphere. The High Level Water Collecting Wet Cooling Tower are used in the industries such as Thermal Power Plant, Oil refined industry, Petrochemical industries and in the Heating, ventilation, and air conditioning (HVAC). The invention disclosed here is Effects of the wind on the High Level Water Collecting Wet Collecting Wet Cooling Tower comprising of: Water Cooling Tower (201); Electric Control (202); Fan-L (203); Fan-H (204); Heater (205); Lower Water Tank (206); Water Pump (207); Upper Water Tank (208); Water Inlet (209); Cold Water Container (210); Water Outlet (211); and Data Recorder (212); facilitates the understanding of the effect of the external wind on the thermal characteristics of the cooling tower. The performance of the cooling tower decreases when there is external wind on the tower and increased performance can be attain without any external wind applied.

No. of Pages : 13 No. of Claims : 7

The Patent Office Journal No. 04/2021 Dated 22/01/2021

3177

Home (http://ipindia.nic.in/index.htm) About Us (http://ipindia.nic.in/about-us.htm) Who's Who (http://ipindia.nic.in/whos-who-page.htm) Policy & Programs (http://ipindia.nic.in/policy-pages.htm) Achievements (http://ipindia.nic.in/achievements-page.htm) RTI (http://ipindia.nic.in/right-to-information.htm) Feedback (https://ipindiaonline.gov.in/feedback) Sitemap (shttp://ipindia.nic.in/itemap.htm)

Contact Us (http://ipindia.nic.in/contact-us.htm) Help Line (http://ipindia.nic.in/helpline-page.htm)

Skip to Main Content Screen Reader Access (screen-reader-access.htm)





INTELLECTUAL PROPERTY INDIA PATENTSI DESIGNSI TRADE MARKS GEOGRAPHICAL INDICATIONS

(http://ipindia.nic.in/inc

# Patent Search

Invention Title	Effects of the wind on the High Level Water Collecting Wet CoolingTower		
Publication Number	04/2021		
Publication Date	22/01/2021		
Publication Type	INA		
Application Number	202041055058		
Application Filing Date	17/12/2020		
Priority Number			
Priority Country			
Priority Date			
Field Of Invention	PHYSICS		
Classification (IPC)	F28C 1/14		
Inventor			
Name	Address	Country	Nat
Dr.Ramu Inala	Associate Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202	India	Ind
Mr.Vinod M	sistant Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India ו Code: 534202		Ind
Mr.Raghuraman M	sistant Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. n Code: 534202		Ind
Mr.Srinivas P	sistant Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. 1 Code: 534202		
Mr.Mahesh Chakravarthi V	ssistant Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. n Code: 534202		Indi
Mr.Bhanuteja Krapa	Assistant Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202	India	Indi
Dr.Venu Mangam	Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202	India	Ind
Applicant			
Name	Address	Country	Nat
Du Dunun la sta		lu ali a	

Dr.Ramu Inala	Associate Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202	India	Indi
Mr.Vinod M	Assistant Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202	India	Indi
Mr.Raghuraman M	Assistant Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202	India	Indi
Mr.Srinivas P	Assistant Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202	India	Indi
Mr.Mahesh Chakravarthi V	Assistant Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202	India	Indi
Mr.Bhanuteja Krapa	Assistant Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202	India	Indi
Dr.Venu Mangam	Professor, Department of Mechanical Engineering, Vishnu Institute of Technology, Bhimavaram, Andhra Pradesh, India. Pin Code: 534202	India	Indi

#### Abstract:

The Cooling Tower is a device used to wipe out the waste heat which is generated to the atmosphere through the cooling of a water stream to a lower temperature. The W collecting Wet Cooling Towers uses evaporation to transform the heat from the water stream to the Air steam to the atmosphere, Saturated Air is discharged into the atmos The High Level Water Collecting Wet Cooling Tower are used in the industries such as Thermal Power Plant, Oil refined industry, Petrochemical industries and in the Heatin ventilation, and air conditioning (HVAC). The invention disclosed here is Effects of the wind on the High Level Water Collecting Wet Cooling Tower comprising of: Water Coo Tower (201); Electric Control (202); Fan-L (203); Fan-H (204); Heater (205); Lower Water Tank (206); Water Pump (207); Upper Water Tank (208); Water Inlet (209); Cold Water Container (210); Water Outlet (211); and Data Recorder (212); facilitates the understanding of the effect of the external wind on the thermal characteristics of the cooling to the cooling

#### **Complete Specification**

Claims:1. Effects of the wind on the High Level Water Collecting Wet Cooling Tower comprising of: Water Cooling Tower (201); Electric Control (202); Fan-L (203); Fan-H (204); Heater (205); Lower Water Tank (206); Water Pump (207); Upper Water Tank (208); Water Inlet (209); Cold Water Container (210); Water Outlet (211); and Data Recorder (212); facilitates the understanding of the effect of the external wind on the thermal characteristics of the cooling tower.

2. Effects of the wind on the High Level Water Collecting Wet Cooling Tower as claimed in claim 1, wherein Cold Water Container in the bottom of the Cooling Tower to collect the cool water from the hot vapor.

3. Effects of the wind on the High Level Water Collecting Wet Cooling Tower as claimed in claim 1, wherein it Electric control for controlling the speed of the Upper and Lower Fan, Heater temperature.

4. Effects of the wind on the High Level Water Collecting Wet Cooling Tower as claimed in claim 1, wherein Hot water from the Lower Take are moved to the Upper Wat Tank through Water Tap and further moved into the Cooling Tower.

5. Effects of the wind on the High Level Water Collecting Wet Cooling Tower as claimed in claim 1, wherein Hot water enters into Water Distribution Nozzles of the cooli tower, this nozzles splits the hot water into drops and are fall on the exchange surface of the cooling tower.

6. Effects of the wind on the High Level Water Collecting Wet Cooling Tower as claimed in claim 1, wherein Water from the vapor is drifted down and the Air with temperature approximately equal to the atmosphere will be drifted out.

7. Effects of the wind on the High Level Water Collecting Wet Cooling Tower as claimed in claim 1, wherein the Top and Bottom of the Cooling Tower we are applying th External Wind of 0.5m/s, due to this the heat transfer coefficient is reduced by approximately 12% than the heat transfer coefficient obtained without applying the extern

View Application Status



Terms & conditions (http://ipindia.gov.in/terms-conditions.htm) Privacy Policy (http://ipindia.gov.in/privacy-policy.htm)

Copyright (http://ipindia.gov.in/copyright.htm) Hyperlinking Policy (http://ipindia.gov.in/hyperlinking-policy.htm)

Accessibility (http://ipindia.gov.in/accessibility.htm) Archive (http://ipindia.gov.in/archive.htm) Contact Us (http://ipindia.gov.in/contact-us.htm) Help (http://ipindia.gov.in/help.htm)

Content Owned, updated and maintained by Intellectual Property India, All Rights Reserved.

Page last updated on: 26/06/2019