

# Analysis of the application a Remote sensing Technology in the monitoring of Water

## Environment and Atmosphere Environment

Zhang weihua

Huaan detection Science then Technology Limited Liability Company , Guangdong , 528300

**Abstract:** For the Water environment and atmospheric environment monitoring, the remote sensing technology is one of the Important technical means, it not only can carry on the real-time monitoring of the water pollution and air pollution, but Also can provide technical support for the scientific, accurate, reasonable and rapid emergency Ion. In recent years, water pollution and air pollution have become worse and worse, which has seriously affected the people ' s Life and industrial production. Therefore, water environment and atmospheric environment, monitoring work becomes particularly. The remote sensing technology, with the continuous development of spaces and time, has a higher spectral, resolution has provided a powerful guarantee for the water and atmosphere environment. This paper mainly describes the basic knowledge to the remote sensing technology, on which basis, it has expounded the FEA Sibility of remote sensing technology in environmental monitoring, besides, through the analysis of the application of REM OTE Sensing technology in water environment and atmosphere environment, it monitoring has further Ion work of water environment and atmosphere environment.

**Keywords:** Remote sensing technology ; Water Environment atmosphere environment; Monitoring

Remote Sensing is a kind of application that developed gradually in the the 1960s test Instrument , It doesn't need to have a physical contact with the probe. , only need to record detect electromagnetic waves from a target , return The reflected electromagnetic wave information to A technique for detecting and determining the final imaging of set , The first word is from the United States The National Research Bureau proposed , on 1962 The year is officially enabled in the United States . Remote Sensingoperation works by absorbing spectral features , Reflection , radiation probe test , different spectra , different objects reflect different things . , remote The sense technology uses this feature to correctly Judge objects . on 1978 year , Remote Sensing technology is formally applied to environmental monitoring as a new technology , This also marks the formal entry of remote sensing technology into people's eyes . with Economy fast development , The problem that brings to the environment is also followed by . in a regular survey , General is both cycle and time-consuming . , does not reflect environmental pollution in time condition . with the advent of remote sensing technology ,China's environmental monitoring in the timeliness of getting the quality fly , and become one of the main means of environmental monitoring in our country .

Copyright ©

This is an open-access article distributed under the terms of the Creative Commons Attribution Unported License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

### 1. Application of remote sensing technology in water environment monitoring

Remote sensing technology not only has space , Real-time , features such as multi-band , and its detection cycle is very short , Get more information way , in the water environment and comprehensive , Accurate detection of contamination extent and extent . i deteriorating state of water environment , work potential for improving water environmental monitoring efficiency in the must line . Traditional monitoring methods have limitations , Traditional monitoring water environment mainly through artificial instantaneous form , This is ground-style , This view of manual detection There are obstructions and limitations to the circumference and area , and also limit manual detection time . Intensification of the contradiction between realistic requirements and existing monitoring methods the background , Remote sensing technology for rapid and widespread application in water environment monitoring .

with the continuous development of remote sensing technology , time for remote sensing data , space and spectral divide resolution is getting higher , eco-monitoring frequency , monitoring content and data precision also Step up , provides greater support for the application of remote sensing technology in water environmental monitoring solid protection . in recent years , worsening State of water environment in China , to working with monitoring of water environment , more important . in the context of the limitations of traditional monitoring methods The actual demand and insufficient existing monitoring mode in the background , Remote sensing technology is particularly important in water environmental monitoring applications . in monitoring water environment , remote Sense technology based on different temperatures ,sediment content , The number of algae through remote sensing image to determine the extent of water pollution . polluted water has different clean water. features , These features are tracked by remote sensing and can display through an image come to , on this basis , Remote sensing technology is fast and widespread in water environmental monitoring the Applies .

displays through the information provided by the China Environmental Monitoring Authority , Our water environment is mainly facing three major issues : First, pollutant emissions exceed water environment capacity ; two the rivers and lakes are generally contaminated ; The third is the increase of water consumption and the environmental problems of intensifies . to troubleshoot problems with the water environment , also need the following aspects for monitoring ; First is urban sewage monitoring , The city has a large number of emitters industrial Waste water Organic , This largely worsens the water quality . Remote sensing technology enough to determine water pollution by spectral images of water bodies , to enough to monitor the movement of contaminants in real time , can also be based on changes in suspended solids to determine the source of the indicator . Second is monitoring of water thermal pollution , on There is a large amount of suspended solids in wastewater , These will directly cause reflex locations , in the , Most use spectral images to monitor , You can also use thermal infrared monitoring based on changes in temperature for . Thermal infrared sensors are compared to heat sources

Full life cycle cost design of transmission line

\*Xu tong wen

( Jiangxi Hengtai Power Surveying and Design Co., Ltd. Jiangxi 330096

Abstract: Every link in a transmission line takes into account the whole life cycle idea , This paper is mainly about the cost of the whole life cycle of transmission lines (fecyclecosts , LCC) composition , calculation and calculated programs . article with 500kV transmission lines As object of study , for Wire , Insulator , Line Tower , Tower , Base, path scheme and so on The parts of the key do a detailed calculation , not only make an investment once , two times schedule , all inclusive , Integrated design considerations and reasonable planning expenses , in The end of the article indicates that the most effective of the current technical and economic aspects is the , Best Design Strategy .

Keyword: Overhead transmission Line ; full life cycle cost ( LCC); Invest once ; Insulator ; Base ; Path Figure category number :T Literature identifier :A

Cost design for transmission line life Cycle cost

Xu Tongwen

(Jiangxi hengtai Electric power Survey , and design Co., Ltd., Jiangxi, 330096)

Abstract : The thinking of life cycle Cost (LLC) should be taken into consideration for each link to the transmission line. And in this paper, it mainly introduces the composition, calculation ways and calculation procedure of the lifecycle costs (LCC) of transmission line. In this paper, it is sensitive, to accurately, effectively tracks sources of heat pollution. Last is The monitoring of eutrophication of water bodies, the main monitoring of this is the nutrient composition of the water body excess, causes a large number of plants in the water body to multiply. Remote sensing technology can be used to judge water bodies by the steep slope response between phytoplankton chlorophyll and near-infrared light in the body's eutrophication.

## **2. Application of remote sensing technology in air pollution monitoring**

Industrial emissions from industrial plants, soot and live coal emissions exhaust gas, dust and synthetic volatile toxic gases, these are all to destroy the atmosphere. Remote sensing technology in atmospheric environmental quality monitoring side face provides technical support. Remote sensing technology through various monitoring methods to form remote sensing shadow like, the range of atmospheric pollution by remote sensing images, pollution source location, etc. make solid monitor, through various aspects of data analysis to accurately draw the air pollution process degree. Conventional atmospheric environment monitoring is just a point sample, main in-room analysis content of pollutants in the atmosphere, and sample to monitor and evaluate atmospheric environment quality condition. distribution of monitoring data for point sampling, not representative and can on sex. Remote Sensing monitoring of the atmospheric environment is the use of remote sensing sensors to the atmospheric environment to monitor the, mainly on the structure of the atmosphere, state changes, etc., these prisons test no direct touch target required, only requires a culture trace monitoring, can be quick, effective location for source of pollution, and then get full "" Atmospheric Environment comprehensive information. but water vapor in the air, carbon dioxide, methane, etc. All gas components have their own radiation, such as: spectral distribution wavelength of water vapor is 0.7um, and ozone is in 0.55~0.65 um, that requires remote sensing technology to monitor atmospheric radiation through appropriate bands, absorption spectra, Remote sensing technology The visible light range is 0.40~0.75um bands, To derive atmospheric environment The component of the pollutant in the ..

in monitoring atmospheric environment, Atmospheric aerosol monitoring is mainly suspended all kinds of liquid in the atmosphere, solid particle, and commonly seen smoke, fog, dust etc, These are the composition of aerosols. can look through remote sensing images out of, factory-emitted smoke, fog and massive dust storms, Volcanic Eruptions A large area of smoke resulting from a fire in a forest and so on., and these in

Remote Sensing images have a clear representation of. on 1986 year Zhao Berlin scholar through use NOAA/AVHRR Data, The large aerosol in the sea atmosphere is research, results show, The accuracy of the calculation has met the climate and environmental requirements of the requires. in atmospheric environmental monitoring, monitoring Harmful gases also very important, Harmful gases are often man-made or naturally produced sulfur dioxide, Vinyl, and fluoride things, Smog etc volatile gases, These gases are to the biological organism are with damage. Remote sensing technology for monitoring of harmful gases there are two ways to do this, - one is specific judgment on the changes in the reflection of the polluted area of the gas and its boundary conditions harmful The condition of the gas; The other is the way to indirectly interpret the flags, to actually reverse The Act to infer the nature and extent of harmful gases. in the monitoring of harmful gases in, either directly - observing the reflectance spectra of pollutants or indirect interpret by, The final principle is to specifically monitor for changes in reflectivity harmful gases, To a large extent, this provides a scientific method for monitoring atmospheric pollutants methods.

## **3. Epilogue**

Now remote sensing technology has developed to be accurate, Dynamic, Monitor in real time air pollution

and water pollution in cities , can also effectively monitor cities land changes , city Traffic , disaster warning and sudden, widespread pollution Change etc , to take appropriate first aid measures in time , Further reduce atmospheric pollution effects of the dye . so say , Remote Sensing monitoring technology in water environment , Atmosphere The plays a very important role in both environmental management and air pollution control . remote the application of sense technology in water environment and atmospheric environmental monitoring , not only provides its own Unique Advantages , and with the continuous breakthrough of various sensor technologies , This is The application of remote sensing technology in water environment and atmospheric environment monitoring provides a powerful protection .

Introduction to authors

Zhang Weihua ( 1989~ , men , Huaan Detection Technology Co., Ltd. , Research-side To: environment monitoring .

(The responsible editor : New Youjian)