

Sound

Application of Ultrasonic Sound

ULTRASONIC SOUND

As already mentioned, sound can be beyond and below the human audible range. So, any sound that is higher than this range is called the ultrasonic sound. The application of ultrasonic sound is not just numerous, it is also highly beneficial. Students are required to understand each application of ultrasonic waves in different fields for a clear understanding of this concept. Some of the common areas are medical, navigation, cleaning, etc. All these ultrasound uses are unique and have their respective areas of use. Ultrasonic sound has various applications in multiple fields due to its precision in results. It has been in use for a long time, and with the passage of time, it has only gained momentum. Scientists have found newer applications in the field of medical sciences, notably being that of treating patients and conducting minor surgeries.

Ultrasound Used

- **Ultrasonography**

Commonly practiced application of ultrasonic waves is in conducting ultrasonography. It is an imaging technique which is used by doctors to check on a developing baby.

- **Echolocation**

Probably one of the most common uses of ultrasonic sound is echolocation. The flying mammals or bats use this locating technique to navigate to their prey in the dark.

- **Echocardiography**

Echocardiography or what is precisely known as ECG is another popular medical application of ultrasound. Again an imaging technique, here the sound waves travel inside the body to present an image of the condition of a patient's heart.

- **Clearing**

Cleaning of spiral tubes and various electronic components are other applications of ultrasonic waves in physics. The materials to be cleaned are put in a liquid where such ultrasound is passed, and cleaning is carried out.

- **Crack Detection**

Another ultrasonic sound and its application is in the detection of cracks. Usually, cracks or fissures in high buildings and significant metal components are detected through waves.

- **Lithotripsy**

Among other significant areas for application of ultrasound, a major one is that of conducting lithotripsy. It is the process of breaking stones in the kidney by passing waves of high frequency.

- **Sonar**

Submarines use this technique of passing high-frequency waves under water for navigational purposes. These sound waves can easily travel in water and are used for communication and detection of other submarines as well.

Therefore, when you look for what are the uses of ultrasound, read about other applications too. It will help you in building a stronghold on the topics. Related concepts must also be read since this topic has innumerable applications.

The uses of ultrasonic sounds are:

1. They are used in medical field for diagnosis and treatment of internal illnesses of the human body.
2. Using ultrasound, kidney stones can be broken into small grains which later on get flushed out through the urine.
3. Ultrasonography is used to examine the foetus during pregnancy.
4. Ultrasound is also used in heart checks (ECG).
5. Industrially, ultrasonic sounds are useful in examining metals for defects like cracks etc. and for cleaning machine parts.