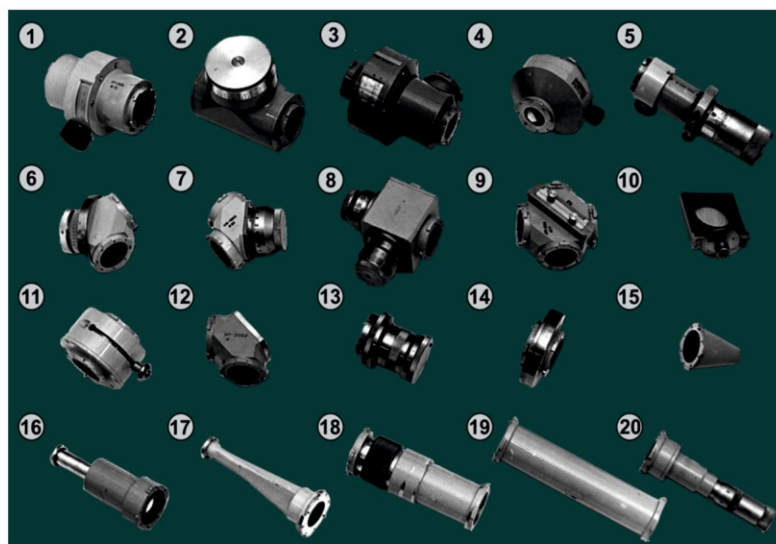


QUASI-OPTICAL RADIO MEASURING DEVICES ON THE BASIS OF A CIRCULAR HOLLOW DIELECTRIC BEAMGUIDE OF SUBMILLIMETER AND MILLIMETER WAVE BAND



Some elements of the set are shown on the photo:
1- direct reading polarization attenuator;
2- adjustable phase shifter; 3- attenuator-polarization power divider; 4- polarization rotator; 5- resonance wavemeter; 6- angled bend-polarization converter; 7- angled bend-phase shifter; 8- polarization converter; 9- beam splitter; 10- renewable cassette; 11- linear polarizer; 12- 90° angled bend; 13- dihedral reflector; 14- rotary joint; 15- nonreflecting termination; 16, 17- HDB excitors (adapters); 18- telescopic joint; 19- HDB section; 20- movable reflector.

Areas of Application

A set of quasi-optical elements in 0.3...2.5 mm wavelength band is suggested for the design of radio measuring schemes available.

Advantages

The set has no analogues in Ukraine and abroad.

IPR Protection

IPR1, IPR3

Specification

The elements are built on the basis of a circular hollow dielectric beamguide (HDB) having diameter of 20 mm. HDB operates in the HE₁₁ mode, characterized by the plane phase front, linear polarization, and axially symmetric amplitude distribution. The mode maximum lies on the beamguide axis and field magnitude smoothly falls toward the beamguide walls.

Stage of Development

IRL7, TRL8.

The manufacturing, delivering, warranty and training services are included.

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