

## NEW INEQUALITIES FOR ROTOR FRAMES IN HILBERT SPACE

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*Abstract.* In this paper, a new identity of the Weyl-Heisenberg frame using a rotation operator has been investigated in Hilbert space. The characterization and significance of Rotor frame inequalities have been discussed by using rotation and translation operators. Also discussed the application of Rotor frames using a rotation operator. Finally, the reconstruction theorem has been investigated for recovers original data. In this work, we would like to highlight that the reconstruction theorem used to obtain the energy of the signal and reconstruct the original signal with eradicated the garbage vector using frame operator in Hilbert space. Today, this technique is very useful in communication systems.

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