
ASIA INTERNATIONAL MULTIDISCIPLINARY CONFERENCE
AIMC 2017
ASIA
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CONFERENCE 2017
TECHNOLOGY & SOCIETY:
A MULTIDISCIPLINARY PATHWAY FOR
SUSTAINABLE DEVELOPMENT
1-2 MAY 2017
UNIVERSITI TEKNOLOGI MALAYSIA
Science, Technology
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AIMC 2017

ASIA International Multidisciplinary Conference

Conference Program


Science, Technology &
Engineering
(STE 2017)

Abstract ID: **AIMC-2017-STE-213**

SEABED IDENTIFICATION USING SIDE SCAN SONAR INSTRUMENT WITH PATTERN DISCRETE-EQUI-SPACED UNSHADED LINE ARRAY METHOD

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Introduction: *The Punggur Sea is located in Batam, Riau Islands. Side scan sonar (SSS) is a sonar system development instrument which has the capability to show the images of the two-dimensional surface of the seabed by contour conditions, topography, and the target simultaneously. The Beam Pattern Discrete – equi-spaced unshaded Line Array Method was used to compute the two-dimensional beam pattern which depends on the angle of the incoming sound waves from the axis of the array were accepted have been depending on the angle at which the sound beam array.* **Methodology:** *This research was conducted in December 2016 in the Punggur Sea, Batam, Riau Islands-Indonesia, and its coordinate system is 104° 08,7102 E and 1° 03,2448 N until 1° 03.3977 N and 104° 08,8133 E, using Side Scan Sonar Tow C-Max CM2 fish instruments with a frequency of 325 kHz.* **Findings:** *The recorded results show that there are 7 targets, and Beam pattern of Discrete-Beam Equi-Spaced unshaded Line Array method in target 4 has the highest value in the directivity pattern is 21.08 dB. The results of the beam pattern model show that neither the central value at the incidence angle (o) of the directivity pattern (dB) were not at the 0 (zero) or the beam pattern central have been generated by the target 6 with incident angle -1.5 o and 1.5o. In addition, it has declined by 40 dB. The bottom sediment in the Punggur Sea was founded the highly concentrate of the sand.* **Contribution:** *For Data Information About Seabed Identification, Checking Method Of Modelling Data, Identification Underwater object.*

Keywords: Side Scan Sonar, Beam Pattern Discrete-Equi-Spaced Unshaded Line Array, Incidence angle, Directivity pattern.