

**I'm not a robot!**

26311625248 22104841.844156 2496192.9322034 32848808046 15298176498 70246680339 5000889.9137931 5341158.8529412 73227687204 22376979.095745 21030458.676768 58518309420 34728815.5 7594525.5555556 63020394850 1483126507 36102336840 129694253.75 18378113.057143 4513032.4202899 28610.337209302  
38051037.5 46012681.035714 27070213.210526 29817066890 127769701865 28347745.835821

osap ed nalp nu euq ed n<sup>3</sup>Äisiced al <sup>3</sup>Ämrifaer odinU onieR led omerpuS lanubirT le ,1202 ed erbmeivon nE .zacife s;Äm etneup ed opiuqe nu y aruges s;Äm ocrab ed n<sup>3</sup>Äicarepo anu a eyubirtnoc ,omsim ol recah arap sorto a ratneiro y ,SIDCE ed opit adac odnof a razilitu a rednerpA .ram le ne n<sup>3</sup>Äicagevan ed sedadilibah sus ralorrased y renetnam edeup etnaligiv nu euq secacife s;Äm sarenam sal ed anu se SIDCE le ne selbinopsid sacinc©Ät y senoicnuf sal sadot ed osu le racitcarP .ovitanretla otneimanocisop ed odot©Äm nu ed sPOL sol noc SSNG sol ed n<sup>3</sup>Äicisop al etnemacid<sup>3</sup>Airep rasiver ebed etnaligiv IE .SSNG ed lautca n<sup>3</sup>Äicisop al ed abeup' al se SIDCE ed avitcefe n<sup>3</sup>Äicagevan al arap evalc aL .dutitcaxe us racifirev om<sup>3</sup>Äc y n<sup>3</sup>Äicisop ase odavired ah es om<sup>3</sup>Äc rednetne etnatropmi se ,ân<sup>3</sup>Äicisopâ anu etnemaunitnoc rartsom edeup SIDCE euq sartneim ,euq ed etneicsnoc res çâ n<sup>3</sup>Äicazilausiv y dadiruges ed n<sup>3</sup>Äicarugifnuc al ralucitrap ne ,SIDCE al ed otneimicelbatse le ne etnetepmoc reS :ebed SIDCE ed rodarepo nu ,osu us ne aznaifnuc renet y SIDCE ed sotelpmoc soicifeneb sol renetbo araP .aicnaliqiv al y sejasap ed n<sup>3</sup>Äicacifinalp al arap sacic;Ärp serojem sal acatsed ,MEPA aÄgolodotem al odnazilitu ,y SIDCE ed atcerroc n<sup>3</sup>Äicarugifnuc al arap sotneimidecorp ecelbatse gnipeekhctaW dna gninnalP egassaP SIDCE ed n<sup>3</sup>Äicide atsE .acitc;Ärp ed sacinc©Ät serojem sal ed n<sup>3</sup>Äisnerpmoc al riulf a serotcel sol a aduya )oerotonin y n<sup>3</sup>Äicuceje ,n<sup>3</sup>Äicacifinalp ,lasiarppa( MEPA le omoc senoicartsuli e sarutpac SIDCE odazilautcA .samrala ed n<sup>3</sup>Äitseg al y )NIMACS( alacse ed ominÄm le omoc samet rednetne omoc Äsa ,dadiruges ed sonrotnoc sol y satcerroc dadiruges ed sedadidnuforp sal rajif omoc selat ,SIDCE ne selbinopsid sacinc©Ät y senoicnuf sal sadot ed osu le neuqitcarp euq a serodarepo sol a atneilA .zacife s;Äm setneup ed opiuqe nu a y aruges s;Äm n<sup>3</sup>Äicagevan/n<sup>3</sup>Äicarepo anu a odneyubirtnoc ,SIDCE ed ovitsuhxe otneimiconoc nu noc setnagevan sol a apiuqe n<sup>3</sup>Äicacilcup atsE effectively makes the ship jurerously undesirable. In the case in question, a large container ship fits. The company was considered responsible by several several dollars when it was determined that the chart had not been correctly updated. It was confirmed that the step plan (evaluation and planning stages) and the subsequent navigation outside a floating street did not reflect a warning given in a warning to sailors. the warning stated that the depths shown on the table outside the street were unreliable and that the waters were less deep than those recorded on the table. the electronic screen display and the information system (ecdis) is a development in the navigation graphics system used in naval vessels and ships. with the use of the electronic graphics system, it has become easier for a ship's navigation crew to identify locations and reach instructions. ecdis complies with the regulation imo V/19 and V/27 of the convention alone as amended, showing selected information of an electronic navigational chart system (senc). the ecdis equipment that meets the single requirements can be used as an alternative to paper graphics. In addition to improving the safety of navigation, ecdis greatly facilitates the workload of the browser with so automatic capabilities, such as route planning, route monitoring, automated eta computing and enc update. Furthermore, ecdis provides many other sophisticated navigation and security features, including continuous data registration for further analysis. ecdis uses the feature of the global positioning system (gps) to successfully identify the navigation points. It should also be borne in mind that ecdis adheres to the provisions established by the international maritime organization, and therefore adds to the reliability of the electronic graphics system. ecdis is basically a navigation information system, interconnected with other navigation equipment such as the .selanoicida .selanoicida samitÄram aroprocni e alev ed senoiccerid y saeram ed salbat omoc ,sacitu;Än senoicacilcup sarto ne adinetnoc n<sup>3</sup>Äicamrofni artseum y aroprocni n©Äibmat SIDCE .cte ,rednuoS ohcE ,APRA ,radaR ,oryG such as radar information, climate, ice conditions and automatic identification of ships. ECDIS Advantages of ECDIS on Paper Tables All information is processed and shown in real time It relieves the process of passage planning All necessary navigation information can be obtained at a glance Alarms and indications are underway to indicate and highlight the dangers Charging correction is made easier in ECDIS compared to paper graphics The graphics can be adapted according to the travel requirement Other navigation equipment such as AIS, ARPA etc can be superimposed and integrated graphics can be guided according to the requirement With the installation to expand and exit, the features can be examined as needed One can get a more accurate ETA Charts can be interrogated for detailed information All in all, improves the safety of the navigation types of the ECDIS Raster Chart (RNC): RNCs are a direct copy or scan of the paper graphics. It looks identical to a paper chart, as all the information displayed is printed directly. The graph only grows bigger or smaller according to the zoom and when it rotates, it all rotates. Vector Chart (ENC): ENCs are computer-generated graphics. The details of an ENC can be turned on and off depending on the user's requirement. The objects in the ENC can be clicked for more details about it. Depths can also be monitored to obtain a warning on the ground. When approaching, the characteristics grow large or small, but the text remains the same. ECDIS coated under the following state control requirements SOLAS Chapter 5 Port status control requirements IMO performance standards for ECDIS S 52 Standard (Reproduction Standard) S 57 Standard (Comparative Standard) S 63 Standard (Reproduction Standard)oi data) enc (electric navigation chart) display base (you can't delete information) standard screen full display custom display minimum display of the position of the speed sensor interface performance ecdis ecdisECDIS with approved backup Type of approved hardware Approved Installation Official Loading Service Forming Officers Upgrade graphics to the ECDIS charts can reach the ship in several ways, depending on the capabilities of the service provider and the communication facilities on board. On the Media of Data Distribution (DVD) As an e-mail attachment (SATCOM) As a SATCOM transmission message more additional communication hardware As a download of Internet Voyage Recording Minute per minute recording during the last 12 hours of the 4 hour travel log intervals for a 6-month period Dual Fuel: Dual Fuel is the use of RNCs when ENCs is not available with backup of the approved paper chart. Alarms and/or Indicators in ECDIS Exceeding cross-track limits Crossing selected safety contour Desviation from the route Critical Point Approach Different datum from the positioning system Alarms or Indication Largest scale for alarm (present chart too small a scale) Area with special conditions Malfunction of ECDIS Indication The scale chart (zoomed too close) Highest scale ENC available Different reference units Route crosses the security outline Route crosses the specific area activated for alarms System test error To facilitate understanding, the indications can be visual or audible, while the alarms must be audible and can also be visual. Power supply ECDIS and all necessary equipment for normal operation should be operated when supplied by an emergency source of electrical energy Changing one power supply to another or any supply interruption for a period of up to 45 seconds should not require the equipment to be manually reinitialized Carriage )2102 )2102 oiluj 1 setna tliuB( 4102 araP à dliuB gntsixE 2102 oiluj araP à dliuB weN TG 005 > slesseV sorejasaP GT New Build - In July 2013 Existing Build - For 2018 (Built before July 1, 2013) Cargo Vessels  $\sqrt{3000}$  GT New Build - For July 2014 Cargo Vessels  $\geq 50000$  GT Existing Build - For 2016 Cargo Vessels  $\geq 20000$  GT Existing Build - For 2017 ECDIS Limitations The accuracy of the information received through AIS is as good as the accuracy of the AIS. The same applies to all other equipment connected to the ECDIS. The position of the ships received on the ECDIS display cannot be referenced to WGS 84 datum Over-reliance on ECDIS for navigational safety should be avoided until it is confirmed that all the data transmitted, received and displayed are accurate Users must be aware that any erroneous information is detrimental to the safety of own as well as other vessels Some sensors may lack integrity regarding accuracy and those that have not been tested Not all ships are equipped with ECDIS and therefore you cannot be sure of the technical capacity with respect to positioning and navigation; the type that ECDIS provides It is never prudent that the OOW depends exclusively on the information about the ECDIS. IT is only a help to navigation and never replaces the human quotient that provides the ability and experience with which an ECDIS can never provide. IMO Performance Standards for ECDIS The main function of ECDIS is to contribute to safe navigation ECDIS with adequate backup arrangements can be accepted as compliance with the updated graphics required by the 1974 SOLAS Convention V/20 Regulation In addition to the general requirements for the radio shipwreck team that is part of the GMDSS and for the help of electronic navigation contained in the ECDIS Resolution A.694 (17), the ECDIS must meet all requirements of the necessary grass for the safe and efficient navigation originated by the authority and distributed in it rasep A .airatinamuh aduya al ed on y anredom aÄgolonet al ed edneped euqub le euq ay sodaesed on setnedicca rative lic;Äf s;Äm ohceh ah es ,n<sup>3</sup>Äicagevan ed satur ed odazart y odacram ed ocin<sup>3</sup>Ärtcele ametsis etse ed n<sup>3</sup>Äicpoda al etnaideM .selautca sopmeit sol ne dadiralupop s;Äm zev adac odnanag ;Ätse euq oglal se SIDCE ed otpecnec IE .SIDCE osruc le ne adartne al arap oiverp otisiuqer omoc COR APRA aicnetepmoc ed odacifitrec nu ed n<sup>3</sup>Äisesop al noreisup n©Äibmat sotutitsni sol sodot isaC .osruc led aicnenet al etnarud serodalumis ed s©Äavart a argol es omsim oL .SIDCE ed n<sup>3</sup>Äisnerpmoc al y dadilibah al ,otneimiconoc le racatsed ebed es ,ametsis us ne SIDCE odnacluci socrab s;Äm y s;Äm noC .)aidnI rof gnippihS GD ,olpmeje rop( sÄap nu ed rotcer onagr<sup>3</sup>Ä ovitcepser le rop n<sup>3</sup>Äicaborpa us arap odasiver res ebed n©Äibmat otutitsni IE .otutitsni led bew oitis oiporp le ne odasiver res euq y osruc le arap etnerefid soicerp ed ognar nu eneit n<sup>3</sup>Äicutitsni adaC .atreibuc ed etedaC omoc ram le ne o±Äa nu odatelpmoc rebah nebed sotadidnac sol lauc le arap n<sup>3</sup>Äicarud ed saÄd 5 ed osruc nu se lareneg ol roP .SIDCE osruc le necudnoc euq sotutitsni sohcum yaH gnniarT SIDCE opiuqe led otneimanocinu lam o adartsom n<sup>3</sup>Äicamrofni al a otcepser noc sadaiporpa senoicacidni o samrala ranoicroporp ebed SIDCE .onreiboG le rop sadaziotua sacif;Ärgordih sanicifo sal rop odacilcup lepap ed ocif;Ärg le euq n<sup>3</sup>Äicatneserp al ed dadilibinopsid y dadilibaif amsim al sonem la renet ebed SIDCE euqub led n<sup>3</sup>Äicisop al etnemaunitnoc razart ed zapac res ebeD .lelap ed socif;Ärg sol ne etnemlautca ecilaer es euq atur al ed otneimanocisop y aicnaliqiv ,n<sup>3</sup>Äicacifinalp al adot anutropo y etneinevnoc arenam ed etuceje oreniram le euq ritimrep ebeD .lelap ed ocif;Ärg le noc n<sup>3</sup>Äicarapmoc ne n<sup>3</sup>Äicagevan ed ojabart ed nemulov le ricuder aÄrebed SIDCE ocin<sup>3</sup>Ärtcele n<sup>3</sup>Äicagevan ed ocif;Ärg led elbaif y alicnes n<sup>3</sup>Äicazilautca anu ratilicaf naÄrebed SIDCE sadaziotua sacif;Ärgordih sanicifo sal some reviews of some industry players, you can easily say that ECDIS as an electronic graphics system is something that allows shipping and ship owners a lot of mental freedom when it comes to the safety of the vessel in the seawater by making ship navigation faster, simpler and sleeker. Disclaimer: Ä The authors' views expressed in this article do not necessarily reflect the views of Marine Insight. Ä Data and charts, if used, in the article have been sourced from available information and have not been authenticated by any statutory authority. The author and Marine Insight do not claim it to be accurate nor accept any responsibility for the same. The views constitute only the opinions and do not constitute any guidelines or recommendation on any course of action to be followed by the reader. The article or images cannot be reproduced, copied, shared or used in any form without the permission of the author and Marine Insight. Ä Insight. Ä