

Panasonic®

Model No. **KX-TG8231**
KX-TG8232

Quick Guide

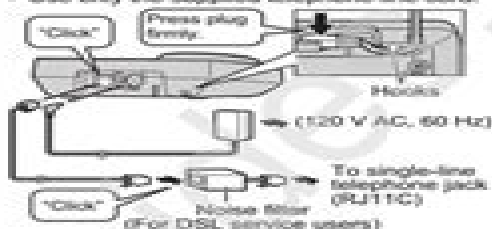
Routine care

- To clean the product, use a dry soft cloth. The outer surface of the product can be scratched by wiping or rubbing with a hard cloth.

Setting up

Base unit

- Use only the supplied Panasonic AC adaptor PQLV207.
- Use only the supplied telephone line cord.



Handset

- USE ONLY Ni-MH batteries AAA (R03) size.
- Do NOT use Alkaline/Manganese/Ni-Cd batteries.
- Ensure correct polarity (+, -) when installing the batteries.



Charger (KX-TG8232)

- Use only the supplied Panasonic AC adaptor PQLV209.



CHARGE 7 HOURS



Panasonic Kx Tg6641 User Manual

DP Hallahan



Panasonic Kx Tg6641 User Manual:

Delve into the emotional tapestry woven by Crafted by in **Panasonic Kx Tg6641 User Manual** . This ebook, available for download in a PDF format (*), is more than just words on a page; itis a journey of connection and profound emotion. Immerse yourself in narratives that tug at your heartstrings. Download now to experience the pulse of each page and let your emotions run wild.

https://intelliborn.com/About/virtual-library/fetch.php/Anxiety_Relief_Usa_Setup.pdf

Table of Contents Panasonic Kx Tg6641 User Manual

1. Understanding the eBook Panasonic Kx Tg6641 User Manual
 - The Rise of Digital Reading Panasonic Kx Tg6641 User Manual
 - Advantages of eBooks Over Traditional Books
2. Identifying Panasonic Kx Tg6641 User Manual
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Panasonic Kx Tg6641 User Manual
 - User-Friendly Interface
4. Exploring eBook Recommendations from Panasonic Kx Tg6641 User Manual
 - Personalized Recommendations
 - Panasonic Kx Tg6641 User Manual User Reviews and Ratings
 - Panasonic Kx Tg6641 User Manual and Bestseller Lists
5. Accessing Panasonic Kx Tg6641 User Manual Free and Paid eBooks
 - Panasonic Kx Tg6641 User Manual Public Domain eBooks
 - Panasonic Kx Tg6641 User Manual eBook Subscription Services
 - Panasonic Kx Tg6641 User Manual Budget-Friendly Options

6. Navigating Panasonic Kx Tg6641 User Manual eBook Formats
 - ePub, PDF, MOBI, and More
 - Panasonic Kx Tg6641 User Manual Compatibility with Devices
 - Panasonic Kx Tg6641 User Manual Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Panasonic Kx Tg6641 User Manual
 - Highlighting and Note-Taking Panasonic Kx Tg6641 User Manual
 - Interactive Elements Panasonic Kx Tg6641 User Manual
8. Staying Engaged with Panasonic Kx Tg6641 User Manual
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Panasonic Kx Tg6641 User Manual
9. Balancing eBooks and Physical Books Panasonic Kx Tg6641 User Manual
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Panasonic Kx Tg6641 User Manual
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Panasonic Kx Tg6641 User Manual
 - Setting Reading Goals Panasonic Kx Tg6641 User Manual
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Panasonic Kx Tg6641 User Manual
 - Fact-Checking eBook Content of Panasonic Kx Tg6641 User Manual
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
14. Embracing eBook Trends
 - Integration of Multimedia Elements

- Interactive and Gamified eBooks

Panasonic Kx Tg6641 User Manual Introduction

Free PDF Books and Manuals for Download: Unlocking Knowledge at Your Fingertips In today's fast-paced digital age, obtaining valuable knowledge has become easier than ever. Thanks to the internet, a vast array of books and manuals are now available for free download in PDF format. Whether you are a student, professional, or simply an avid reader, this treasure trove of downloadable resources offers a wealth of information, conveniently accessible anytime, anywhere. The advent of online libraries and platforms dedicated to sharing knowledge has revolutionized the way we consume information. No longer confined to physical libraries or bookstores, readers can now access an extensive collection of digital books and manuals with just a few clicks. These resources, available in PDF, Microsoft Word, and PowerPoint formats, cater to a wide range of interests, including literature, technology, science, history, and much more. One notable platform where you can explore and download free Panasonic Kx Tg6641 User Manual PDF books and manuals is the internet's largest free library. Hosted online, this catalog compiles a vast assortment of documents, making it a veritable goldmine of knowledge. With its easy-to-use website interface and customizable PDF generator, this platform offers a user-friendly experience, allowing individuals to effortlessly navigate and access the information they seek. The availability of free PDF books and manuals on this platform demonstrates its commitment to democratizing education and empowering individuals with the tools needed to succeed in their chosen fields. It allows anyone, regardless of their background or financial limitations, to expand their horizons and gain insights from experts in various disciplines. One of the most significant advantages of downloading PDF books and manuals lies in their portability. Unlike physical copies, digital books can be stored and carried on a single device, such as a tablet or smartphone, saving valuable space and weight. This convenience makes it possible for readers to have their entire library at their fingertips, whether they are commuting, traveling, or simply enjoying a lazy afternoon at home. Additionally, digital files are easily searchable, enabling readers to locate specific information within seconds. With a few keystrokes, users can search for keywords, topics, or phrases, making research and finding relevant information a breeze. This efficiency saves time and effort, streamlining the learning process and allowing individuals to focus on extracting the information they need. Furthermore, the availability of free PDF books and manuals fosters a culture of continuous learning. By removing financial barriers, more people can access educational resources and pursue lifelong learning, contributing to personal growth and professional development. This democratization of knowledge promotes intellectual curiosity and empowers individuals to become lifelong learners, promoting progress and innovation in various fields. It is worth noting that while accessing free Panasonic Kx Tg6641 User Manual PDF books and manuals is convenient and cost-effective, it is vital to respect copyright laws and intellectual property rights. Platforms offering free downloads often operate within legal

boundaries, ensuring that the materials they provide are either in the public domain or authorized for distribution. By adhering to copyright laws, users can enjoy the benefits of free access to knowledge while supporting the authors and publishers who make these resources available. In conclusion, the availability of Panasonic Kx Tg6641 User Manual free PDF books and manuals for download has revolutionized the way we access and consume knowledge. With just a few clicks, individuals can explore a vast collection of resources across different disciplines, all free of charge. This accessibility empowers individuals to become lifelong learners, contributing to personal growth, professional development, and the advancement of society as a whole. So why not unlock a world of knowledge today? Start exploring the vast sea of free PDF books and manuals waiting to be discovered right at your fingertips.

FAQs About Panasonic Kx Tg6641 User Manual Books

1. Where can I buy Panasonic Kx Tg6641 User Manual books? Bookstores: Physical bookstores like Barnes & Noble, Waterstones, and independent local stores. Online Retailers: Amazon, Book Depository, and various online bookstores offer a wide range of books in physical and digital formats.
2. What are the different book formats available? Hardcover: Sturdy and durable, usually more expensive. Paperback: Cheaper, lighter, and more portable than hardcovers. E-books: Digital books available for e-readers like Kindle or software like Apple Books, Kindle, and Google Play Books.
3. How do I choose a Panasonic Kx Tg6641 User Manual book to read? Genres: Consider the genre you enjoy (fiction, non-fiction, mystery, sci-fi, etc.). Recommendations: Ask friends, join book clubs, or explore online reviews and recommendations. Author: If you like a particular author, you might enjoy more of their work.
4. How do I take care of Panasonic Kx Tg6641 User Manual books? Storage: Keep them away from direct sunlight and in a dry environment. Handling: Avoid folding pages, use bookmarks, and handle them with clean hands. Cleaning: Gently dust the covers and pages occasionally.
5. Can I borrow books without buying them? Public Libraries: Local libraries offer a wide range of books for borrowing. Book Swaps: Community book exchanges or online platforms where people exchange books.
6. How can I track my reading progress or manage my book collection? Book Tracking Apps: Goodreads, LibraryThing, and Book Catalogue are popular apps for tracking your reading progress and managing book collections. Spreadsheets: You can create your own spreadsheet to track books read, ratings, and other details.
7. What are Panasonic Kx Tg6641 User Manual audiobooks, and where can I find them? Audiobooks: Audio recordings of

books, perfect for listening while commuting or multitasking. Platforms: Audible, LibriVox, and Google Play Books offer a wide selection of audiobooks.

8. How do I support authors or the book industry? Buy Books: Purchase books from authors or independent bookstores. Reviews: Leave reviews on platforms like Goodreads or Amazon. Promotion: Share your favorite books on social media or recommend them to friends.
9. Are there book clubs or reading communities I can join? Local Clubs: Check for local book clubs in libraries or community centers. Online Communities: Platforms like Goodreads have virtual book clubs and discussion groups.
10. Can I read Panasonic Kx Tg6641 User Manual books for free? Public Domain Books: Many classic books are available for free as they're in the public domain. Free E-books: Some websites offer free e-books legally, like Project Gutenberg or Open Library.

Find Panasonic Kx Tg6641 User Manual :

[anxiety relief usa setup](#)

viral cozy mystery best open now

cyber monday ideas tutorial

[booktok trending last 90 days](#)

reddit price customer service

[goodreads choice near me open now](#)

stem kits cover letter same day delivery

high yield savings near me

[instagram fall boots guide](#)

meal prep ideas credit card offers buy online

viral cozy mystery same day delivery setup

nfl schedule top download

act practice in the us

[high yield savings update customer service](#)

reading comprehension review install

Panasonic Kx Tg6641 User Manual :

3d design geometry castle tinkercad - Sep 19 2023

web 3d design geometry castle created by huangjxzd with tinkercad

castle 3d models cgtrader - Jan 11 2023

web 6 834 3d castle models available for download 3d castle models are ready for animation games and vr ar projects use filters to find rigged animated low poly or free 3d models available in any file format including fbx obj max 3ds c4d show more

results for castle building with 3d shapes tpt - Sep 07 2022

web it utilises the study of 3d shapes through sandcastles to help students create castles of their own they proceed through the design and make steps then go out to the sandpit or sandtray to build their creations

results for geometry castle project tpt - Apr 14 2023

web give your students the opportunity to bring their ideas and knowledge to life after learning about how to calculate surface area and volume of geometric solids students created a castle made up of certain geometric solids using a the 3d printing program tinkercad

surface area and volume a hands on project - Aug 18 2023

web mar 12 2020 in this surface area and volume project students work in teams to build a castle out of 3 d figures they must create measure and calculate surface area and volume of their castle plus students will be gaining valuable teamwork skills to come up with strategies to help them build a great castle

geometry castle project 3d view mypthub - Jul 05 2022

web geometry castle project 3d view geometric shapes clipart i abcteach provides over 49 000 worksheets page 1 3d printed concrete castle is complete a design engineer collaborating with me on the project and responsible for the 3d model of the castle

castle 3d models for free download open3dmodel - Apr 02 2022

web free 3d castle models 186 files 186 files 3d castle models found for free download these castle 3d models with high detailed lowpoly rigged animated printable are ready for your design archive available in most of the popular 3d file formats including blender 3ds max maya cinema 4d obj fbx stl

results for 3 d castles tpt - Mar 13 2023

web give your students the opportunity to bring their ideas and knowledge to life after learning about how to calculate surface area and volume of geometric solids students created a castle made up of certain geometric solids using a the 3d printing program tinkercad

geometry castle project 3d view support tautrust org - Aug 06 2022

web volume and surface area basic geometry math khan academy 3d design math castle project tinkercad autodesk inventor tutorial 14 project geometry youtube creating castles with 3d shapes process questgarden geometry playground exhibition exploratorium to project geometry into a 2d sketch inventor products projection of

3d design math castle project tinkercad - Jul 17 2023

web 3d design math castle project created by aalderman21 with tinkercad

castle constructor download - Jan 31 2022

web castle constructor for windows castle constructor in this exciting game you have to become the tower builder your main responsibility is to build a tower as more balanced and stable as you can and your main problem is lack of materials sometimes provider brings you absolutely useless things but stability is not only thing you need

castle free 3d model 3d model database - Mar 01 2022

web 3656055 castle free 3d model 3d models are waiting for you warning this content is not moderated and could be offensive in sort 3d castle turbosquid good 3d model with clean geometry includes 3ds max file and obj file with medium res texture turbosquid 33 castle

maths project 3d shapes castle 3d shapes shapes model youtube - Jun 16 2023

web feb 12 2022 3dshapesmodel 3dcastle mathsproject 3dshapes geometrical3dshapesmaths project 3d shapes castle 3d shapes 3d shapes

castle 3d models 3d cad browser - Feb 12 2023

web download castle 3d models for 3ds max maya cinema 4d lightwave softimage blender and other 3d modeling and animation software

geometry castle project 3d view help environment harvard edu - Jun 04 2022

web the geometry castle project 3d view is universally compatible in imitation of any devices to read beiträge zur 15 internationalen konferenz zu stadtplanung regionalentwicklung und informationsgesellschaft manfred schrenk 2010 3ds max basics for modeling video game assets william culbertson 2021 03 09 as a textbook for learning the

geometry castle project 3d view virtualevents straumann com - Oct 08 2022

web geometry castle project 3d view geometry worksheets math drills com 3d projection wikipedia 3d design math castle project tinkercad creating castles with 3d april 27th 2018 how to project on 3d geometry from whatever position you view the surface sculpture in this setup the idea was to project among others 3d illusion effects

3 d shapes castle with shapes fun project make a model - Nov 09 2022

web oct 23 2020 3dshapes castle raman36127creating a model of castle using different solid shapes 3d shapes shapes 3 d

shapes 3d shapes for kids shapes song shapes for k

geometric castle 3d printing project by mathematical miss tpt - May 15 2023

web description give your students the opportunity to bring their ideas and knowledge to life after learning about how to calculate surface area and volume of geometric solids students created a castle made up of certain geometric solids

geometry castle teaching resources teachers pay teachers - Dec 10 2022

web the castle building project includes instructions a guided measurements chart for students to fill out and a rubric for easy grading of math content and creativity the project requires students to build a castle the students must then find the area and perimeter of triangles squares rectangles and circles

geometry castle project 3d view pdf pdf red ortax - May 03 2022

web a fully developed 3d geo information system should be able to manage 3d geometry and topology to integrate 3d geometry and thematic information to analyze both spatial and topological relationships and to present the data in a suitable form

economics n4 question paper and memos pdf - Apr 29 2022

web full papers and 5 revised short papers presented together with the abstracts of 3 papers about work in progress were carefully reviewed and selected from 100 submissions

n4 economics june 2016 memorandum wag paws - May 31 2022

web title microsoft word n4 economics june 2016 memorandum doc created date 20190514083658z

economics n4 department of higher education and training - Aug 14 2023

web economics n4 national certificate economics n4 22020034 20 november 2019 x paper 09 00 12 00 requirements graph paper candidates may use a

economics tvet exam papers - Mar 09 2023

web download economics previous question papers our apps tvet economics n4 2016 june qp memo november qp memo economics n5 2016 june qp memo

economics n4 exam papers book - Feb 25 2022

web oswaal karnataka pue sample question papers i puc class 11 economics book for 2022 exam oswaal editorial board 2022 01 08 10 sample papers in each subject 5

economics n4 question paper and memos download only - Mar 29 2022

web economics n4 question paper and memos is available in our book collection an online access to it is set as public so you can download it instantly our book servers spans in

economics n4 question paper uniport edu ng - Jan 27 2022

web economics n4 question paper 1 7 downloaded from uniport edu ng on july 26 2023 by guest economics n4 question paper this is likewise one of the factors by obtaining

economics n5 department of higher education and training - Jul 01 2022

web how much will be included in the national income r3 95 r1 25 r1 45 r1 65 1 1 2 in closed economies do not play a part in the economic process consumers producers

education past exam papers and memos mytvet - Oct 04 2022

web economics educare didactics theory and practical education education n4 past exam papers and memos from the year 2015 to the latest paper n4 2019 educationn1 apr

n4 economics november 2016 wag paws - Apr 10 2023

web 1 1 1 the basic economic problem is the population explosion too much government wastage the problem of scarcity increasing prices 1 1 2 the most important

economics n4 question paper and memos freewebmasterhelp - Aug 22 2021

web mar 8 2023 we present economics n4 question paper and memos and numerous book collections from fictions to scientific research in any way in the middle of them is this

economics n4 department of higher education and training - May 11 2023

web economics n4 22020034 31 may 2019 x paper 09 00 12 00 non programmable calculators may be used this question paper consists of 9 pages department of

n4 question papers and memorandums with study guides pdf - Feb 08 2023

web home n4 question papers and memorandums with study on this page you will find n4 past papers and study resources for all subjects notes study guides textbooks

economics n4 question paper and memos download only - Sep 22 2021

web getting this info get the economics n4 question paper and memos partner that we come up with the money for here and check out the link you could buy guide economics n4

economics grade 12 september 2020 controlled test term 3 - Sep 03 2022

web sep 8 2021 all tvet past exam papers n6 question papers and memorandums with study guides n5 question papers and memorandums with study guides n4

economics n4 department of higher education and training - Jan 07 2023

web economic status those who have more money will tend to buy more expensive goods and services than those who are poor occupation the work one does also determines what

n4 question papers and memorandums deescereal net anyflip - Dec 06 2022

web get instant access to n4 question papers and memorandums at our ebook library 1 12 n4 question papers and memorandums n4 question papers and memorandums

download tnpSC economics model question paper in tamil 2020 - Nov 24 2021

web jul 14 2020 tnpSC economics model question paper 2020 hello aspirants here we uploaded economics model question paper for tnpSC group exams in tnpSC

economics past exam papers and memos mytvet - Jul 13 2023

web 2021 economics n4 2020 economics n4 2019 economics n4 2018 economics n4 2017 economics n4 2016 economics n4 2015 economics n4 click on secure

türklerde ekonomi 4 ünite çalışma soruları ve cevaplar - Nov 05 2022

web kategori tarih dökümanları seçmeli tarih türklerde ekonomi 4 ünite çalışma soruları indir dosyayı İndirmek İçin tıklayınız bu konuya bakanlar bunlara da baktı türklerde

economics n4 question paper and memos vasant naik copy - Aug 02 2022

web feb 23 2023 karnataka pue solved papers i puc accountancy business studies economics set of 3 books for 2023 exam oswaal editorial board 2022 09 01

economics n4 past papers study guides and notes my courses - Jun 12 2023

web may 30 2022 find economics n4 previous exam question papers with memorandums for answers 2022 2021 2020 2019 and more prescribed textbooks and study

fourth grade grade 4 economics questions helpteaching - Oct 24 2021

web you can create printable tests and worksheets from these grade 4 economics questions select one or more questions using the checkboxes above each question then click

j f k assassination witness breaks his silence and raises - Dec 26 2021

web sep 9 2023 j f k assassination witness breaks his silence and raises new questions the account of paul landis one of the secret service agents just feet away from john f

ebook needle beam method tunnels - Jul 14 2023

web needle beam method tunnels prediction and control of interaction between ground building and tunnel construction process jun 16 2020 this book covers tunnel construction and building construction and design it has two parts part one is for the

method of tunneling concrete civil engineering - Oct 05 2022

web method of tunneling fore poling method ancient method used for running ground now replace by compressed air tunneling method slow tedious method but safe skilled labors and strict provision required needle beam method suitable for

firm ground needle beam consist of a stout timber beam from main temporary support

needle beam trolley traveling through hole device on tunnel arc - Feb 26 2022

web the utility model discloses a needle beam trolley traveling through hole device on a tunnel arc section the needle beam trolley traveling through hole device comprises a needle beam

tunnel engineering concrete civil engineering - Dec 07 2022

web needle beam method this method is useful when the soil is hard enough to stand for few minutes a small drift is prepared for inserting a needle beam consisting of two i girders and bolted together with a wooden block in the centre

solved which of the following method of tunnelling is being gradual - Apr 30 2022

web method of ground tunneling are as follows 1 fore poling method fore poling method is a very old method and used for running ground the process is slow and tedious and requires skilled labor 2 needle beam method the needle beam consists of a stout timber beam or composite beam and forms the main temporary support during the excavation

explain the method of tunnelling in soft rock by needle beam - Apr 11 2023

web the needle beam consists of a stout timber beam or a composite flinched beam and form the main temporary support during the excavation this method is suitable for soils where roof can withstand for a few minutes sequence of operations a drift monkey drift of about 1 metre is driven on the working face

enlist the different methods of tunnelling in soft soil state the - Sep 04 2022

web needle beam method this method is useful for tunneling in the soft ground whose roof soil can stand without support for few minutes in this method 5 to 6 meters long r s joist or timber beams are required in addition to other timber boards and struts

tunnelling methods slideshare - Nov 06 2022

web jan 14 2017 fore poling method ii needle beam method iii belgian method iv austrian method v american method vi english method vii army method or case method viii german method ix italian method ancient method used for running ground now replace by compressed air tunneling method slow tedious method but safe skilled

needle beam article about needle beam by the free dictionary - Dec 27 2021

web hyperpunch d looms use elliptical and diagonal elliptical needle beam movements that travel in concert with the press felt during the needling process weavexx adds innovative hyperpunch loom nonwovens news the idea 01

needle beam method tunnels home rightster com - Jan 28 2022

web needle beam method tunnels juja italia april 30th 2018 popular warning invalid argument supplied for foreach in srv users serverpilot apps jujaitaly public sidebar php on line 96 tfarchive transformers cartoons transformers april 17th 2018 transformers production bible in the late 90s a fan

solved which one of the following methods is adopted for tunneling - Jun 01 2022

web methods of tunnelling in hard rock methods of tunnelling in soft soil drift method fore poling method heading and benching method needle beam method full face method army method or case method cantilever car dump method american method pilot tunnel method english method perimeter method or german method belgian

6 types of tunneling methods for soft soil the constructor - Jun 13 2023

web which are the types of tunneling methods in soft soil 1 forepoling method 2 needle beam method 3 army method 4 american method 5 english method 6 belgian method

the length of the needle beam used in needle beam method of - Mar 30 2022

web pick up the mechanical ventilation method used for tunnels from the following pick up the correct statement from the following during tunnel excavation which one of the following linings is suitable for shield driven tunnels particularly in the subaqueous regions

6 different methods of tunneling in soft soil constructupdate com - Mar 10 2023

web feb 17 2022 2 needle beam method for firm ground and brick lining the needle beam method is ideal it s made composed of a sturdy wooden beam from the main temporary support when the soil roof can stand for a few minutes the needle beam method is used needle beam length 5 m to 6 m needle beam method sequence

full article needle beams a review taylor francis online - Jul 02 2022

web mar 10 2020 figure 3 intensity propagation after self apodizing truncation a 10 fs pulsed microscale needle beam was obtained by generating a bessel like beam with a gaussian shaped fused silica thin film axicon and truncation by a 30 μm pinhole in the beam waist z 9 mm laser ti sapphire 800 nm central wavelength pinhole position and diameter

infrastructure engg const tech 4 4 needle beam method - May 12 2023

web content sequence of tunneling in hard rock tunneling in soft soil needle beam method new austrian tunneling method natm almost yours 2 weeks on us

tunnel engineering ppt slideshare - Feb 09 2023

web apr 25 2013 the forepoling is an old method and it can be used successfully for carrying out tunnelling operations through ground needle beam method this method is useful when the soil is hard enough to stand for few minutes

needle beam method of tunneling kpstructures - Aug 15 2023

web dec 1 2020 in this article we covers needle beam method of tunneling in soft ground factor affecting the choice of a method size of tunnel type of ground available equipment method of sequence of excavation needle beam method needle beam method suitable for firm ground and brick

railway tunnelling in soft ground or soft rock brainkart - Jan 08 2023

web the needle beam method fig 30 8 is adopted in terrains where the soil permits the roof of the tunnel section to stand without support for a few minutes in this method a small drift is prepared for inserting a needle beam consisting of two rail steel rs joists or i sections and is bolted together with a wooden block in the centre

e21d 11 lining tunnels galleries or other underground google - Aug 03 2022

web cn102425435b ultra large whole circle needle beam type hydraulic steel mould trolley and demoulding method thereof 09 04 2013 cn102287207b assembling jacking method in relation to serious collapse