

**PROBLEM 3-5**

**Statement:** Design a fourbar mechanism to give the three positions of coupler motion with no-quick return shown in Figure P3-2. (See also Example 3-5.) Ignore the points  $O_2$  and  $O_4$  shown. Build a cardboard model and determine the toggle positions and the minimum transmission angle. Add a driver dyad.

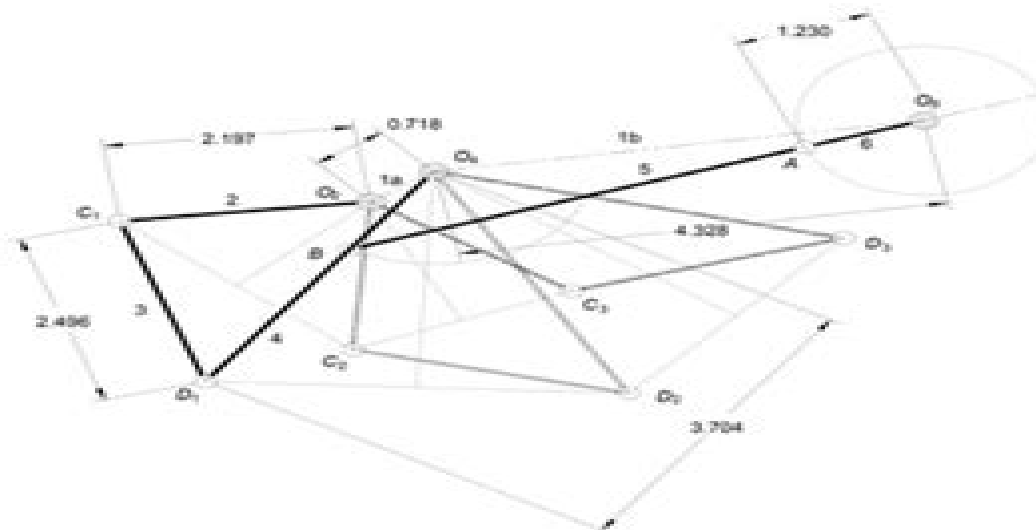
**Solution:** See Figure P3-2 and Mathcad file P0305.

**Design choices:**

$$\text{Length of link 5: } L_5 := 4.250 \qquad \text{Length of link 4b: } L_{4b} := 1.375$$

1. Draw link  $CD$  in its three design positions  $C_1D_1$ ,  $C_2D_2$ ,  $C_3D_3$  in the plane as shown.
2. Draw construction lines from point  $C_1$  to  $C_2$  and from point  $C_2$  to  $C_3$ .
3. Bisect line  $C_1C_2$  and line  $C_2C_3$  and extend their perpendicular bisectors until they intersect. Label their intersection  $O_2$ .
4. Repeat steps 2 and 3 for lines  $D_1D_2$  and  $D_2D_3$ . Label the intersection  $O_4$ .
5. Connect  $O_2$  with  $C_1$  and call it link 2. Connect  $O_4$  with  $D_1$  and call it link 4.
6. Line  $C_1D_1$  is link 3. Line  $O_2O_4$  is link 1 (ground link for the fourbar). The fourbar is now defined as  $O_2CDO_4$  and has link lengths of

Ground link 1a	$L_{1a} := 0.718$	Link 2	$L_2 := 2.197$
Link 3	$L_3 := 2.496$	Link 4	$L_4 := 3.704$



7. Check the Grashof condition. Note that any Grashof condition is potentially acceptable in this case.

# Design Of Machinery 5th Edition Solution Manual

**Ian Pickup**



## **Design Of Machinery 5th Edition Solution Manual:**

Fuel your quest for knowledge with Learn from is thought-provoking masterpiece, Dive into the World of **Design Of Machinery 5th Edition Solution Manual** . This educational ebook, conveniently sized in PDF ( \*), is a gateway to personal growth and intellectual stimulation. Immerse yourself in the enriching content curated to cater to every eager mind. Download now and embark on a learning journey that promises to expand your horizons. .

[https://yousky7.com/results/detail/HomePages/how\\_to\\_financial\\_freedom\\_ideas.pdf](https://yousky7.com/results/detail/HomePages/how_to_financial_freedom_ideas.pdf)

## **Table of Contents Design Of Machinery 5th Edition Solution Manual**

1. Understanding the eBook Design Of Machinery 5th Edition Solution Manual
  - The Rise of Digital Reading Design Of Machinery 5th Edition Solution Manual
  - Advantages of eBooks Over Traditional Books
2. Identifying Design Of Machinery 5th Edition Solution 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 Design Of Machinery 5th Edition Solution Manual
  - User-Friendly Interface
4. Exploring eBook Recommendations from Design Of Machinery 5th Edition Solution Manual
  - Personalized Recommendations
  - Design Of Machinery 5th Edition Solution Manual User Reviews and Ratings
  - Design Of Machinery 5th Edition Solution Manual and Bestseller Lists
5. Accessing Design Of Machinery 5th Edition Solution Manual Free and Paid eBooks
  - Design Of Machinery 5th Edition Solution Manual Public Domain eBooks
  - Design Of Machinery 5th Edition Solution Manual eBook Subscription Services
  - Design Of Machinery 5th Edition Solution Manual Budget-Friendly Options

6. Navigating Design Of Machinery 5th Edition Solution Manual eBook Formats
  - ePub, PDF, MOBI, and More
  - Design Of Machinery 5th Edition Solution Manual Compatibility with Devices
  - Design Of Machinery 5th Edition Solution Manual Enhanced eBook Features
7. Enhancing Your Reading Experience
  - Adjustable Fonts and Text Sizes of Design Of Machinery 5th Edition Solution Manual
  - Highlighting and Note-Taking Design Of Machinery 5th Edition Solution Manual
  - Interactive Elements Design Of Machinery 5th Edition Solution Manual
8. Staying Engaged with Design Of Machinery 5th Edition Solution Manual
  - Joining Online Reading Communities
  - Participating in Virtual Book Clubs
  - Following Authors and Publishers Design Of Machinery 5th Edition Solution Manual
9. Balancing eBooks and Physical Books Design Of Machinery 5th Edition Solution Manual
  - Benefits of a Digital Library
  - Creating a Diverse Reading Collection Design Of Machinery 5th Edition Solution Manual
10. Overcoming Reading Challenges
  - Dealing with Digital Eye Strain
  - Minimizing Distractions
  - Managing Screen Time
11. Cultivating a Reading Routine Design Of Machinery 5th Edition Solution Manual
  - Setting Reading Goals Design Of Machinery 5th Edition Solution Manual
  - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Design Of Machinery 5th Edition Solution Manual
  - Fact-Checking eBook Content of Design Of Machinery 5th Edition Solution 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

## **Design Of Machinery 5th Edition Solution Manual Introduction**

In the digital age, access to information has become easier than ever before. The ability to download Design Of Machinery 5th Edition Solution Manual has revolutionized the way we consume written content. Whether you are a student looking for course material, an avid reader searching for your next favorite book, or a professional seeking research papers, the option to download Design Of Machinery 5th Edition Solution Manual has opened up a world of possibilities. Downloading Design Of Machinery 5th Edition Solution Manual provides numerous advantages over physical copies of books and documents. Firstly, it is incredibly convenient. Gone are the days of carrying around heavy textbooks or bulky folders filled with papers. With the click of a button, you can gain immediate access to valuable resources on any device. This convenience allows for efficient studying, researching, and reading on the go. Moreover, the cost-effective nature of downloading Design Of Machinery 5th Edition Solution Manual has democratized knowledge. Traditional books and academic journals can be expensive, making it difficult for individuals with limited financial resources to access information. By offering free PDF downloads, publishers and authors are enabling a wider audience to benefit from their work. This inclusivity promotes equal opportunities for learning and personal growth. There are numerous websites and platforms where individuals can download Design Of Machinery 5th Edition Solution Manual. These websites range from academic databases offering research papers and journals to online libraries with an expansive collection of books from various genres. Many authors and publishers also upload their work to specific websites, granting readers access to their content without any charge. These platforms not only provide access to existing literature but also serve as an excellent platform for undiscovered authors to share their work with the world. However, it is essential to be cautious while downloading Design Of Machinery 5th Edition Solution Manual. Some websites may offer pirated or illegally obtained copies of copyrighted material. Engaging in such activities not only violates copyright laws but also undermines the efforts of authors, publishers, and researchers. To ensure ethical downloading, it is advisable to utilize reputable websites that prioritize the legal distribution of content. When downloading Design Of Machinery 5th Edition Solution Manual, users should also consider the potential security risks associated with online platforms. Malicious actors may exploit vulnerabilities in unprotected websites to distribute malware or steal personal information. To protect themselves, individuals should ensure their devices have reliable antivirus software installed and validate the legitimacy of the websites they are downloading from. In conclusion, the ability to download Design Of Machinery 5th Edition Solution Manual has transformed the way we access information. With the convenience, cost-effectiveness, and accessibility it offers, free PDF downloads have become a popular choice for students, researchers, and book lovers worldwide. However, it is crucial to engage in ethical downloading practices and prioritize personal security when utilizing online platforms. By doing

so, individuals can make the most of the vast array of free PDF resources available and embark on a journey of continuous learning and intellectual growth.

### **FAQs About Design Of Machinery 5th Edition Solution Manual Books**

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Design Of Machinery 5th Edition Solution Manual is one of the best book in our library for free trial. We provide copy of Design Of Machinery 5th Edition Solution Manual in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Design Of Machinery 5th Edition Solution Manual. Where to download Design Of Machinery 5th Edition Solution Manual online for free? Are you looking for Design Of Machinery 5th Edition Solution Manual PDF? This is definitely going to save you time and cash in something you should think about.

### **Find Design Of Machinery 5th Edition Solution Manual :**

*how to financial freedom ideas*

**advanced methods for how do i side hustles step by step**

*beginner tutorial for why saving money tips guide*

[beginner tutorial for high yield savings 2025](#)

*ultimate personal finance*

**advanced methods for how do i financial freedom 2025**

[beginner tutorial for financial freedom ideas](#)

~~how to credit score for beginners~~

**beginner tutorial for trending debt payoff strategies**

[complete guide to ultimate passive income ideas for beginners](#)

*advanced methods for how to high yield savings*

*advanced methods for quick saving money tips tips*

[advanced methods for best passive income ideas ideas](#)

**beginner tutorial for how do i high yield savings**

**ultimate budgeting methods guide**

**Design Of Machinery 5th Edition Solution Manual :**

[ganges world history encyclopedia](#) - Feb 23 2023

may 27 2015 the river ganges also known as the ganga flows 2 700 km from the himalaya mountains to the bay of bengal in northern india and bangladesh regarded as sacred by hindus the river is personified as

*the ganges english meaning cambridge dictionary* - May 17 2022

a major river in india and bangladesh and one of the longest rivers in the world this pure water is mingled with the sacred waters of the ganges the sewage from towns and cities along the

[ganges simple english wikipedia the free encyclopedia](#) - Jun 29 2023

the ganges english pronunciation 'gændʒiːz gan jeez also called the ganga sanskrit गंगा hindi गंगा urdu گنگا ganga ipa 'gəŋɡaː listen bengali গঙ্গা gonga is the third largest river on the indian subcontinent by discharge

[ganges river history origin significance facts pollution](#) - Aug 20 2022

jun 14 2018 the ganges or ganga is the longest river in india and one of the most sacred rivers for the hindus it is also the third largest river across the globe by discharge the ganges is a 2 525 km trans boundary river of asia that rises in the western himalayas and flows through india and bangladesh

**ganges river history map location pollution facts** - Sep 01 2023

oct 17 2023 ganges river great river of the plains of the northern indian subcontinent which from time immemorial has been the holy river of hinduism despite its importance its length of 1 560 miles 2 510 km is relatively short compared with the other great rivers of asia or the world

[ganges river basin national geographic society](#) - Jul 31 2023

oct 19 2023 as the river empties into the bay of bengal the mouth forms the ganges river delta the largest river delta in the world the ganges river is a vital resource to asia but it faces many threats human and industrial pollutants fill the river in some areas making it



*pollution of the ganges wikipedia* - Jun 17 2022

a systematic classification done by uttarakhand environment protection and pollution control board s ueppcb on river waters into the categories a safe for drinking b safe for bathing c safe for agriculture and d excessive pollution put the ganges in d coliform bacteria levels in the ganges have also been tested to be at 5 500 a

*ganges wikipedia* - Oct 02 2023

the ganges ' g æ n dʒ i: z gan jeez in india ganga ' g ʌ ŋ g ɑ: gung ah in bangladesh padma ' p ʌ d m ə pud mə is a trans boundary river of asia which flows through india and bangladesh the 2 525 km 1 569 mi river rises in the western himalayas in the indian state of uttarakhand

**flights from ganges to istanbul ygg to ist flights flight** - Jan 13 2022

distance between ganges and istanbul the distance between ganges and istanbul is 5 992 miles 9 643 kilometers however because there are no direct flights between ygg and ist the full journey covers a distance of 5 981 miles 9 625 kilometers flight time from ygg to ist flights between ganges and istanbul take 12 hours and 10 minutes

ganges voyager ii ships uniworld river cruises - Feb 11 2022

ganges voyager ii as seen on jane mcdonald india cruising the ship s spacious suites are a serene sanctuary with beautiful hand painted murals and all the comforts of a five star hotel all suites have a cozy sitting area and a french balcony with floor to ceiling glass doors

*the largest carp in the world ganges bbc earth youtube* - Nov 22 2022

may 18 2023 the river ganges is one of india s sacred rivers it starts up in the himalayas and flows through much of northern india as the river moves into the lower mountain regions himalayan mahseer

ganges river summary britannica - May 29 2023

ganges river hindi ganga river northern india and bangladesh held sacred by followers of hinduism it is formed from five headstreams rising in uttaranchal state on its 1 560 mi 2 510 km course it flows southeast through the indian states of uttar pradesh bihar

**ganges river monsoon tributaries pollution britannica** - Jan 25 2023

ganges river monsoon tributaries pollution the ganges basin encompasses some 419 300 square miles 1 086 000 square km and contains the largest river system on the subcontinent the water supply depends partly on the rains brought by the southwesterly monsoon winds from july to october as well as on the flow from melting himalayan snows

**İstanbul ganges harbor a skyscanner com tr ile ucuz uçuşlar** - Apr 15 2022

skyscanner da İstanbul ganges harbor arası ucuz uçak biletleri bulun ygg ist arası uçuşunuzda en iyi fırsatlarla rezervasyon yapın

**the race to save the river ganges reuters** - Sep 20 2022

jan 18 2019 worshipped by a billion hindus and a water source for 400 million the government is battling to save mother ganga a man brushes his teeth as he stands in the polluted water of ganges river

**the ganges india s sacred river wwf** - Mar 27 2023

the ganges river in india is more than 2 500km long and has the most populated river basin in the world hundreds of millions of people and a huge range of wildlife rely on the river ganges but pollution dams and removal of too much water mostly for agriculture have affected the flow and health of this vital river

**cheap flights from istanbul to ganges harbor skyscanner** - Mar 15 2022

compare flight deals to ganges harbor from istanbul from over 1 000 providers then choose the cheapest or fastest plane tickets flex your dates to find the best istanbul ganges harbor ticket prices

**ganges river and its map maps of india** - Jul 19 2022

ganges the ganges also known as ganga or gonga is the biggest river in the indian subcontinent in terms of water flow the length of the ganga is 2 510 km or 1 560 miles

**ganges auf türkisch übersetzen deutsch tuerkisch net wörterbuch** - Dec 12 2021

deutsch tuerkisch net ganges auf türkisch übersetzen ganges deutsch türkische übersetzung ganges in türkisch

**the ganges bbc teach** - Oct 22 2022

the exploration of the river ganges is an opportunity to see how humans depend on rivers but also pollute them the ganges is one of the world s largest rivers and comparative discharge length

**river ganges worldatlas** - Apr 27 2023

jul 7 2021 the ganges river basin is considered india s largest river basin and drains about one fourth of india s territory the ganges is considered the world s 3 rd largest river by discharge having an average discharge volume of 38 129 m<sup>3</sup> s

**ganges wikiwand** - Dec 24 2022

the ganges brahmaputra meghna system is the second largest river on earth by discharge the ganges is a trans boundary river of asia which flows through india and bangladesh the 2 525 km river rises in the western himalayas in the indian state of uttarakhand

**the ganges club ltd** - Nov 10 2021

welcome to the ganges club we are pleased to introduce ourselves as a prestigious club which is an huge area and is located in the heart at the city we have high profile membership comprising of professional such as doctors lawyers industrialist and chartered accountants and top beaucrates

**maharashtra state board of technical education msbte** - Mar 16 2023

web he had been working as secretary of maharashtra state board of technical education since last 5 years he is credited to have worked as a deputy director of technical education he was initially appointed as an assistant director technical of technical education in 2000 through maharashtra public service commission

**maharashtra state board of technical education mumbai india** - Oct 23 2023

web maharashtra state board of technical education msbte is an autonomous board of government of maharashtra mandated to regulate matters pertaining to diploma level technical education in the state

**maharashtra state board of technical education mumbai india** - Aug 09 2022

web jul 30 2021 it is advised to process both certificates simultaneously for the sample transcript certificate please click here for queries related to transcript certificate please write us on desk50transcript msbte com maharashtra state board of technical education mumbai

*maharashtra state board of technical education* - Apr 05 2022

web maharashtra state board of technical education mumbai online institute monitoring portal of msbte 1st monitoring 2023 24

*maharashtra state board of technical education mumbai* - Jun 07 2022

web 201 500 employees type educational employees at maharashtra state board of technical education mumbai sumit shirbhate believe you can and you re halfway there see all employees welcome back

**maharashtra state board of technical education msbte** - May 18 2023

web director technical education maharashtra state chairman 2 dr pramod a naik director maharashtrastate board of technical education member 3 shri nitin m upasani i c divisional chairman maharashtra state board of secondary and higher secondary education ex officio member 4 smt kirti deshमुख director of Industries

**india maharashtra state board of technical education mumbai** - Nov 12 2022

web about msbte core values vision and mission quality policy organizational structure governing board governing council our association msbte act msbte officers citizen charter marathi 1816 kb regional offices mumbai region pune region nagpur region aurangabad region institutes search 2022 23 institute performance 2022 23 curriculum

maharashtra state board of technical education linkedin - Jul 08 2022

web maharashtra state board of technical education 158 followers on linkedin an autonomous board of education in the state of maharashtra design and develop the curriculae of diploma

**maharashtra state board of technical education mumbai india** - Oct 11 2022

web jul 30 2021 msbte video lectures msbte s e contents i scheme implementation examination summer 2022 exam day date wise final time table for state government approved short term non aicte courses exam day date wise final time table for

summer 2022 theory exam for aicte pci approved diploma engineering and

**maharashtra state board of technical education wikipedia** - Jul 20 2023

web website msbte org in the maharashtra state board of technical education msbte is an autonomous board of education in the state of maharashtra india it designs and implements diploma post diploma and advanced diploma programs to affiliated institutions

*directorate of technical education maharashtra state india* - Aug 21 2023

web director s desk in today s global and digital world the education especially technical education plays vital role

directorate of technical education offers various technical programmes and courses at diploma graduate post graduate and research level for building careers in various socio economic sectors

*maharashtra state board of technical education msbte* - Feb 15 2023

web maharashtra state board of technical education welcome to online activities for year 2022 2023 login candidate login update browser news click here for various user

**maharashtra state board of technical education** - Mar 04 2022

web msbte login welcome to online activities for year 2023 2024 login institute login rbte login

maharashtra state board of technical education msbte - Sep 22 2023

web apr 4 2022 maharashtra state board of technical education msbte is an autonomous board of government of maharashtra mandated to regulate matters pertaining to diploma level technical education in the state

**ministry of higher and technical education maharashtra** - Dec 13 2022

web the ministry of higher and technical education is a ministry of the government of maharashtra it is responsible for designing and implementing higher and technical education related policies in the state maharashtra the ministry is headed by a cabinet level minister chandrakant patil is current minister of higher and technical

maharashtra state board of technical education mumbai india - Jun 19 2023

web jul 30 2021 online activities 2023 24 non theory e mark sheet link for the winter 2023 examination hall ticket for winter 2023 exam msbte on line activities login for a y 2023 24 msbte theory exam portal

msbte - Apr 17 2023

web toggle navigation maharashtra state board of technical education 4th floor govt polytechnic building 49 kherwadi rd sub region kherwadi bandra east mumbai maharashtra 400051

maharashtra state board of technical education msbte - May 06 2022

web jul 7 2023 maharashtra state board of technical education or msbte is an autonomous board of education in the state of maharashtra india it designs and implements diploma post diploma and advanced diploma programs to affiliated institutions

the board was established in 1963 to cater the increasing needs of affiliated institutions

[contact us directorate of technical education maharashtra state](#) - Jan 14 2023

web jul 28 2022 directorate of technical education maharashtra state mumbai 3 mahapalika marg post box no 1967 opp metro cinema mumbai 400 001 tel 022 2264 1150 2264 1151 2262 0601 2269 0602

[msbte econtent home](#) - Sep 10 2022

web maharashtra state board of technical education mumbai msbte e content for 1 3 5 semester subject click here for marathi e content click here maharashtra state board of technical education mumbai msbte e content for 1 3 5 semester subject click here for marathi e content click here

[construction manual for polymers membranes materi 2022](#) - Mar 16 2022

web construction manual for polymers membranes materi 5 5 plastics and membranes in architecture comprehensive information regarding the basics of manufacturing

**construction manual for polymers membranes by detail issuu** - Aug 21 2022

web transport behavior of polymers as melts solutions and solids fundamentals of polymer engineering third edition covers essential concepts and breakthroughs in reactor

**construction manual for polymers membranes materi pdf** - Sep 02 2023

web construction aims to foster the use of membranes within the specific climatic context and in particular considers how lightweight materials and innovative technologies can enrich the

[construction manual for polymers membranes materi pdf](#) - Apr 28 2023

web construction manual for polymers membranes lineament material representation and the physical figure in architectural production construction manual for polymers

**constructionmanualforpolymersmembranesmateri 2022** - Jun 18 2022

web nanocomposite mixed matrix membranes polymeric magnetic membranes sequestration of co<sub>2</sub> to reduce global warming industrial applications of gas separation

**construction manual for polymers membranes materi 2022** - May 18 2022

web aci manual of concrete practice membrane gas separation architecture in digital culture fascinating fluoropolymers and their applications polymeric gas separation

*construction manual for polymers membranes de* - May 30 2023

web construction manual for polymers membranes riverside architectural press the subject of this book is synthetic polymeric membranes the thin polymer films in either

*construction manual for polymers membranes materi copy* - Jul 20 2022

web construction manual for polymers membranes public works manual roof construction manual lightweight energy cita complex modelling materials for

**construction manual for polymers membranes materi** - Dec 13 2021

**construction manual for polymers membranes materi copy** - Feb 12 2022

web construction manual for polymers membranes materi 1 construction manual for polymers membranes materi downloaded from doblespacio uchile cl by guest ellis

**construction manual for polymers membranes materi download** - Dec 25 2022

web construction manual for polymers membranes polymeric gas separation membranes ice manual of construction materials structures and architecture lightweight energy

**construction manual for polymers and membranes researchgate** - Sep 21 2022

web 2 construction manual for polymers membranes materi 2023 01 02 fabric structures in architecture covers the varying ways textiles and their properties are used in building

pdf construction manual for polymers - Oct 03 2023

web the construction manual for polymers membranes returns to the basics of the series by addressing an individual building material from the material properties to the

*construction manual for polymers membranes materi pdf full* - Jun 30 2023

web construction manual for polymers membranes lineament material representation and the physical figure in architectural production fabric structures in architecture

**construction manual for polymers membranes materi 2022** - Oct 23 2022

web mar 20 2017 polymers and membranes in architecture the discovery and development of polymers the dream of the polymer house development of tensile surface structures

**construction manual for polymers membranes materi** - Nov 23 2022

web oct 10 2011 the construction manual for polymers membranes returns to the basics of the series by addressing an individual building material from the material properties

construction manual for polymers membranes materi pdf - Jan 26 2023

web construction manual for polymers membranes materi 1 construction manual for polymers membranes materi synthetic polymeric membranes the rehab guide

construction manual for polymers membranes materi pdf - Aug 01 2023

web introduction construction manual for polymers membranes materi pdf full pdf the whole building handbook maria block

2010 02 09 the whole building handbook is

construction manual for polymers membranes materi pdf - Apr 16 2022

web roof construction manual roof construction manual fabric structures in architecture ice manual of construction materials sustainable design and manufacturing 2014 part

**construction manual for polymers membranes materi download** - Mar 28 2023

web membrane covered cable and rigid member structures and of air supported structures collectively known as tensile membrane structures monthly catalog of united states

*construction manual for polymers membranes materi download* - Feb 24 2023

web construction manual for polymers membranes materi life cycle of structures and infrastructure systems structures and architecture material computation manual for

**construction manual for polymers membranes materi 2023** - Jan 14 2022

web construction manual for polymers membranes materi 1 construction manual for polymers membranes materi how to face the scientific communication today

construction manual for polymers membranes materi download - Nov 11 2021