Mech 291/391: Summer Practice

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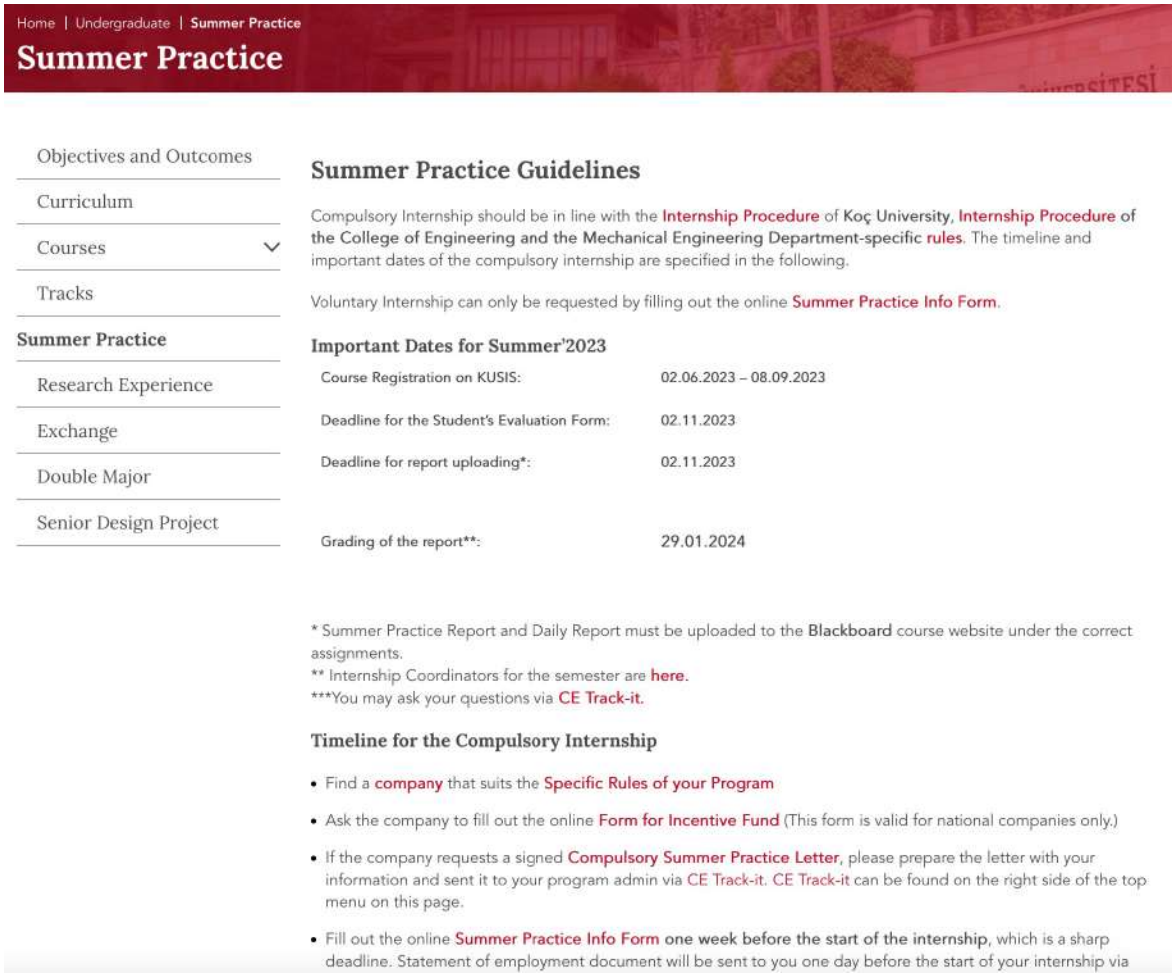
Department of Mechanical Engineering
Koc University
20/02/2024

All Forms and Documents Are Online

- All documents are online at
  - Go to https://me.ku.edu.tr/
  - Select "SUMMER PRACTICE" from "UNDERGRADUATE"



Summer Practice I and II

- All Mech students must participate in Summer practice I and II
  - Summer Practice I (Mech 291): At the end of 2nd year
  - Summer Practice II (Mech 391): At the end of 3rd year
- Each practice must be at least 20 working days

Double Major Students

- If both majors are in engineering
  - One summer practice in Mech and one in the other major
  - Mech practice must be about manufacturing
- The other major is not in engineering
  - Must do both practices in Mech

Registration to Summer Practice Courses

- Before starting the summer practice, you must register to “Mech 291” or “Mech 391” on KUSIS system
- Registration starts after the final exams in spring semester and continues until 20 working days before the fall semester
- 2024 ME Summer Practice Committee
  - Mech 291: Metin Muradoglu (mmuradoglu@ku.edu.tr)
  - Mech 391: E. Murat Sözer (msozer@ku.edu.tr)

New Rules for SSI (SGK) (Effective January 2019)

During the academic year (fall and spring semesters), attending courses is essential. For this reason, our university shall pay for SSI for summer internships only.

- During the academic year, the SSI obligation of the students who want to do an internship at corporations on certain days belong to those corporations. Other than summer term internships, internship SSIs shall never be paid by our university. No student shall be granted any privileges on this regard.
- Registration dates for internship applications shall be announced to all students by the Human Resources Directorate.
- For the internship applications, the internship acceptance letter stating the starting and ending date of the internship can be submitted by filling out the "Voluntary Internship Information Form" via the online system. Online applications that do not include the internship acceptance letter shall be disregarded.
- The date on the internship acceptance letter must match the date recorded on the online system. The students shall be responsible for any problems that may arise due to any difference between those dates.
- In case of changes in the duration of the internship (ending at an earlier or a later date), a new document should be received from the relevant corporation and the update form should be filled out.

New Rules for SSI (SGK) (Effective January 2019)

- The online system shall only be accessible after the end of the academic year. Between the end and beginning of the academic year, multiple internships may be simultaneously done in several corporations provided that the starting and ending dates are specified in advance. Separate applications should be made for each internship corporation. No application shall be accepted after the system is shut down.
- In the “Family Dependent Health Insurance” section of the application, students are required to give information about whether they are already covered by any health insurance. Students who are dependent on their families (who are covered by health insurance through a family member or whose health expenses are met by the health insurance of a family member) should mark “Yes” under that section; while students who are not dependent on their families should mark “No”.
- System registration should be completed at 7 days prior to the start date of the internship, as SSI entries must be notified in advance according to the law.
- Internship students cannot, under any circumstances, work at the university as work study within the same time corresponding to the internship term.
- Internship students are required to register in the related internship course.
- Any and all information regarding the internship process can be obtained from your Faculty Coordinators and Assistants.

Where to do summer practice?

- The practice should be performed in
  - A factory with a manufacturing department
  - A machine shop with adequate equipment
- Summer Practice I and II shall be conducted in
  - a factory/machine shop employing at least two-full time professional engineers of the field of practice
  - excluding the consultants, part-time engineers, graduate students, part-time professors
- The practice must be supervised by an engineer
- University labs are not acceptable!

Summer Practice I

- Must be performed on manufacturing processes
  - machining, foundry work, metal forming, welding, non-conventional machining, heat treatment of materials, finishing, additive manufacturing, etc.
- Students are recommended to be exposed to
  - CAD/CAM (Computer Aided Design/Manufacturing)
  - Production processes
  - Assembly
  - Quality control
  - Research and development

Summer Practice II

- Option 1:
  - May be performed completely on manufacturing processes
- Option 2:
  - 10 working days about manufacturing
  - 10 working days about about engineering management, industrial organization, human resources, finance etc.
- Strong recommendation: Do Summer Practice II in a different company if Summer Practice I has been done in a small or medium enterprise (SME/KOBI)

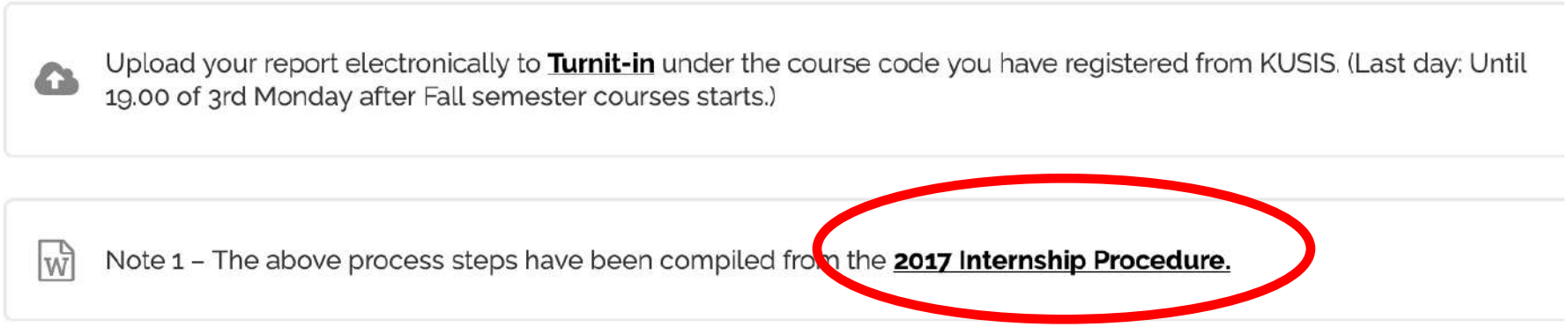
Before Starting Summer Practice

- At least one week prior to starting date
  - Fill out the summer practice information form (Staj Bilgi Formu)
  - Make sure to write your TC ID (TC kimlik numarası)

After Summer Practice

- By 3rd Monday of Fall Semester
  - Fill out the online form carefully
  - Upload "Summer Practice Report" to the turnitin system (www.turnitin.com)
  - Summer practice evaluation form will be sent to your supervisor electronically, so double check that the contact information in the online form is correct.
- Read complete procedure (in Turkish):

https://eng.ku.edu.tr/wp-content/uploads/2016/02/CE_Staj-Prosed%C3%BCr%C3%BC_2017.doc.docx.pdf



How to find a company?

- It is your responsibility to find a company
- But KU Career Office may help (https://career.ku.edu.tr/)
  - They provide the list of companies that KU students have done summer practice before
  - They sometimes have a quota for certain companies such as TAI, Aselsan, THY etc.
  - They also help you about preparing CV, cover letter etc.
- Some faculty members may also have personal contact in some companies.

How to find a company?

- You can search companies from the following lists:
  - http://eng.ku.edu.tr/companies
  - Fortune 500 http://www.fortuneturkey.com/fortune500-2013
  - ISO 500

    http://www.iso.org.tr/Sites/1/content/500-buyuk-liste.html?j=6493030
  - ISI Emerging Markets database

    http://site.securities.com/ci/c_focus.html?pc=TR
- Personal contact, relatives, friends, neighbors etc!

Approval by the committee

- Preapproval is not required but strongly recommended
  - It is your responsibility to make sure that the company is acceptable for summer practice
- To make sure, get preapproval from
  - Metin Muradoglu for Mech 291
  - E. Murat Sözer for Mech 391
- For preapproval, provide them with
  - Web page of the company
  - A contact person with phone number and/or e-mail

Documents required by companies

- Summer practice letter for companies (Staj zorunluluk yazısı)
  - Download the form from web page and fill out

    https://me.ku.edu.tr/wp-content/uploads/2022/03/Summer-Practice-Letter-1.docx

    send it to your program admin via CE Track-it
- Letter about SGK payments (SGK priminin üniversite tarafından ödeneceğine dair yazı)
  - Download, fill out and use it. No signature is required
  - Ask Sarin Simonyan (ssimonyan@ku.edu.tr) if you cannot find the forms

Documents required by KU Human Resources

- KU HR requires the following documents to complete SGK procedure
  - Fill out and submite the internship form (stajer bilgi formu) online at

https://docs.google.com/a/ku.edu.tr/forms/d/e/1FAIpQLSfI7JfxMS1k1wI_hrNhKqRfTfroLaEpohe8Dw6HOyAF8TphFA/viewform?c=0&w=1&includes_info_params=true

  - There is a link from summer practice web page.

https://eng.ku.edu.tr/akademik/makine-muhendisligi/lisans-programi/yaz-staji/

- Contact KU-HR for any questions.

Evaluation form

- The evaluation form (Değerlendirme Formu) will be sent by Dean's Office electronically
  - Double check and make sure to provide correct contact information in the online form.
- Make sure your supervisor fills out "the evaluation form" in a timely manner.

How to write the report?

- Use “Summer Practice Report” that you can download from
  https://me.ku.edu.tr/wp-content/uploads/2023/05/MECH-S.P.-Report.doc.docx
- Should be written according to
  - ACWR 101: Basic academic writing
  - ACWR 106: Basic academic writing for Sci & Tech
- There must be four sections:
  - Description of company
  - Work/project summary
  - Description of project
    - Background of the problem and project
    - Team (You are expected to present a detailed description of the team, specifying interdisciplinary and multidisciplinary aspects. Also, if any, specify the disciplines of team members and the multidisciplinary aspect of the work carried out for multidisciplinary teamwork.)
  - Appendix

How to write the report?

Table of contents

How to write the report?

- Report must be written from a mechanical engineering perspective
  - Incorporate knowledge gained in classes
- It should be 20 to 30 pages excluding cover page and appendices
  - Company description must be at most **one page**
- It must be written in English and typed 1.5 spaced with Arial – 10 pts fonts
- All pages should be given page numbers

How to write the report?

- Figures, pictures, sketches, tables etc.
  - Must be numbered appropriately
  - Must include a caption
  - Must be cited in the text appropriately
- Material taken from other sources
  - Must be quoted appropriately
  - Or must be rephrased
  - Must be cited in both cases (listing in references is not sufficient, it must be cited in the text)

Cover Page

KOÇ UNIVERSITY
College of Engineering

DEPARTMENT OF MECHANICAL ENGINEERING

MECH 291

SUMMER PRACTICE REPORT

Koray Tütüncü

Internship Company and Department:
Esalba Metal Sanayi ve Ticaret A.Ş. / Manufacturing and Engineering Department

15.08.2012 / 14.09.2012

Summary Page

SUMMER PRACTICE REPORT

Student Name : **CEKI SURUJON**

Starting Date : **5 JULY 2010**

Completion Date : **30 JULY 2010**

Total Working Days: **20**

Summer Practice #: **1**

Company : **BASF Türk Kimya San. Ltd. Şti. – DILOVASI Plant**

Department : **TECHNICAL DEPARTMENT**

Address : **Dilovasi Organize Sanayi Bölgesi 1. Kısım Dicle Caddesi No. 34, 41455 Dilovasi – Kocaeli**

Contact Person (Name, Department, Phone, Fax, etc.):

M. Ugur Aydin
Factory Mechanical Engineer
Technical Department
Phone: +90 262 648-9236
FAX: +90 262 648-9299
ugur.aydin@basf.com

Work/Project Summary Page

WORK / PROJECT SUMMARY

Work Day	Date	Work / Project Description
1	24.08.09	Training: Factory Tour, Work Health and Safety (FOD, MSDS)
2	25.08.09	Training: Facility and Information Safety
3	26.08.09	Training: Briefing of Production & Assembly Department
4	27.08.09	Training: Briefing of Composite & Metal Bonding Department
5	28.08.09	Training: Briefing of Information Technologies Department
6	31.08.09	Eurocopter EC-135/ Part Manufacture
7	01.09.09	CASA CN-235/ Part Manufacture
8	02.09.09	Agusta AW 139, KAI KT-1/ Part Manufacture
9	03.09.09	Quality Systems/ Non-Destructive Testing
10	04.09.09	CAMB Building Tour/ Tooling
11	07.09.09	Production & Assembly Building/ Heat Treatment Furnaces
12	08.09.09	Production & Assembly Building/ Heat Treatment Furnaces

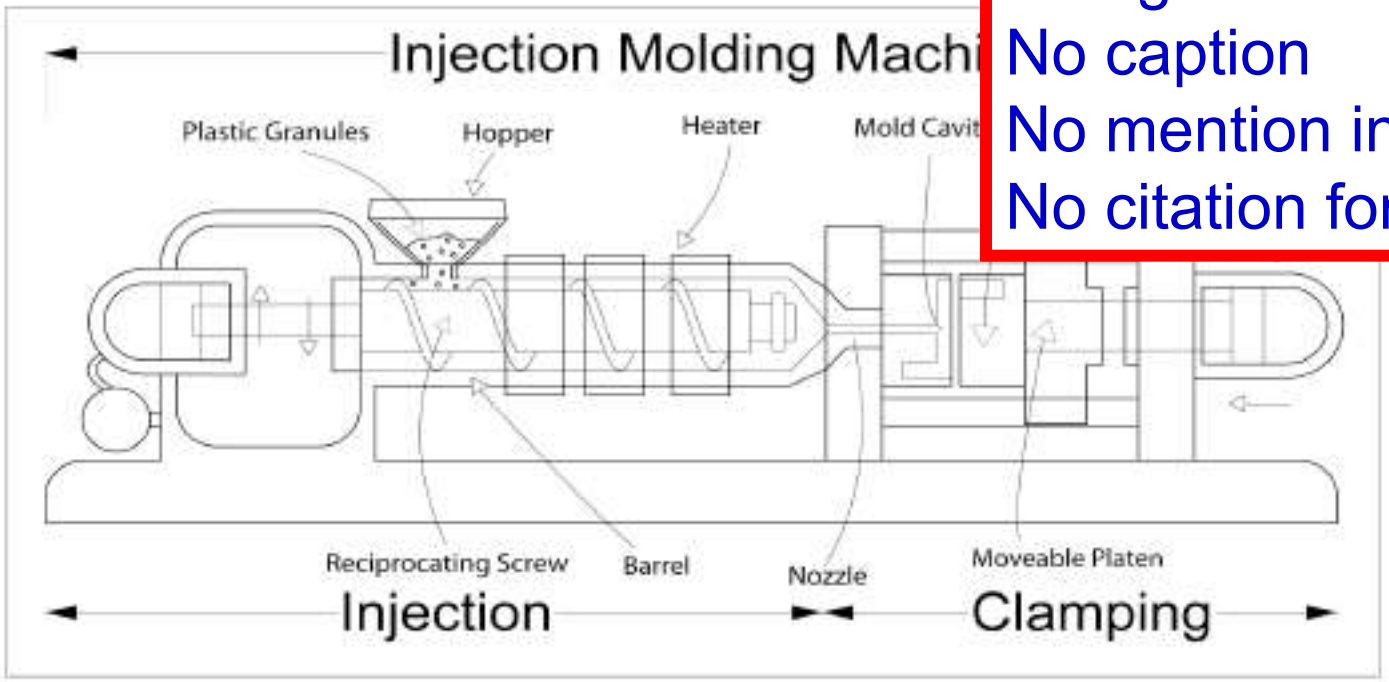
Student's Signature: Date:

Name of Supervisor:

Supervisor's Signature: Date:

Figures: A Bad Example

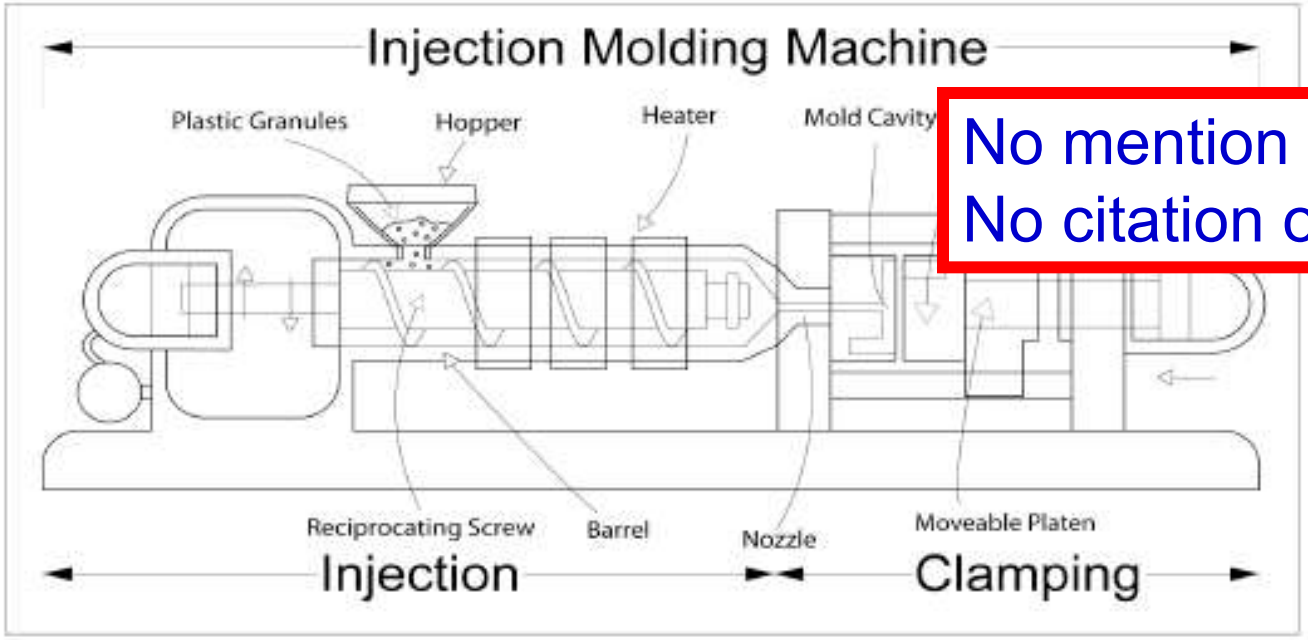
Injection molding is a manufacturing process for producing parts from both thermoplastics and is similar to hot-chamber die casting. The pellets or granules are fed into the heated cylinder, and the melt is forced into the mold either by a plunger or by the rotating screw system of an extruder. Although there an external heater exists, the necessary heat is due to frictional heating.



No figure number
No caption
No mention in the text
No citation for the source

Figure: Better but still not good

Injection molding is a manufacturing process for producing parts from both thermoplastics and is similar to hot-chamber die casting. The pellets or granules are fed into the heated cylinder, and the melt is forced into the mold either by a plunger or by the rotating screw system of an extruder. Although there an external heater exists, the necessary heat is due to frictional heating.



No mention in the text
No citation of the source

Figure 1 Schematic illustration of a typical injection molding machine

Figure: Good

As shown schematically in Fig. (1), injection molding is a manufacturing process for producing parts from both thermoplastics and is similar to hot-chamber die casting. The pellets or granules are fed into the heated cylinder, and the melt is forced into the mold either by a plunger or by the rotating screw system of an extruder. Although there an external heater exists, the necessary heat is due to frictional heating.

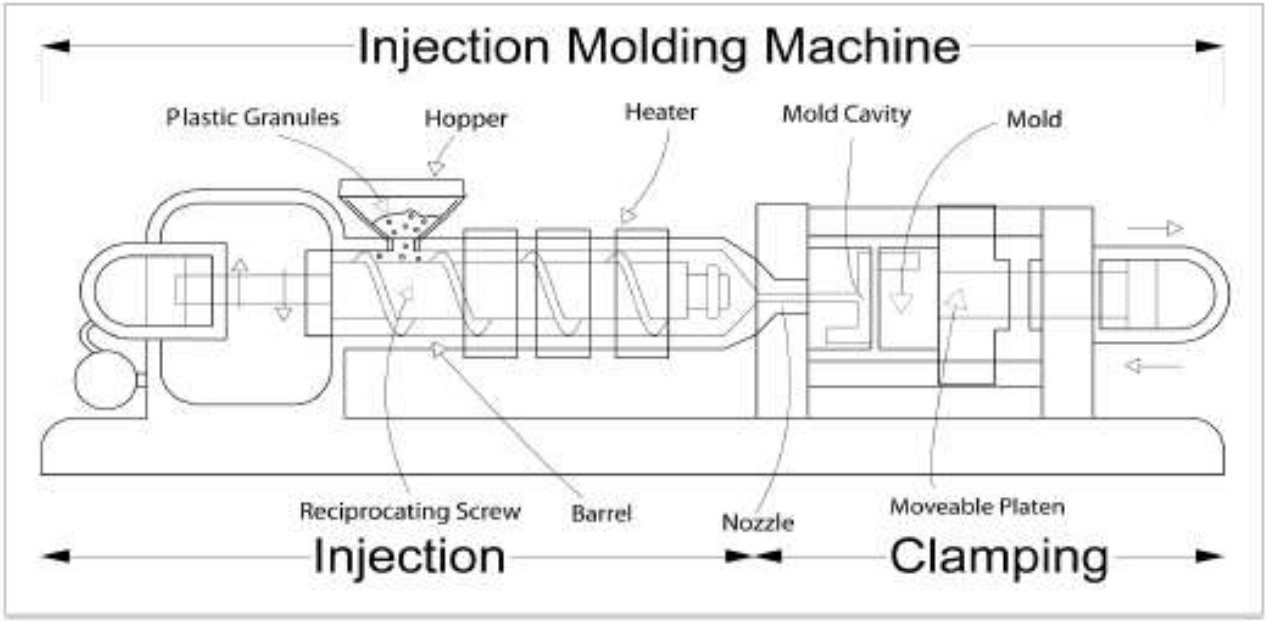


Figure 1: Schematic illustration of a typical injection molding machine [12].

Figure: Good

As shown schematically in Fig. (1) injection molding is a manufacturing process for producing parts from both thermoplastics and is similar to hot-chamber die casting. The pellets or granules are fed into the heated cylinder, and the melt is forced into the mold either by a plunger or by the rotating screw system of an extruder. Although there an external heater exists, the necessary heat is due to frictional heating.

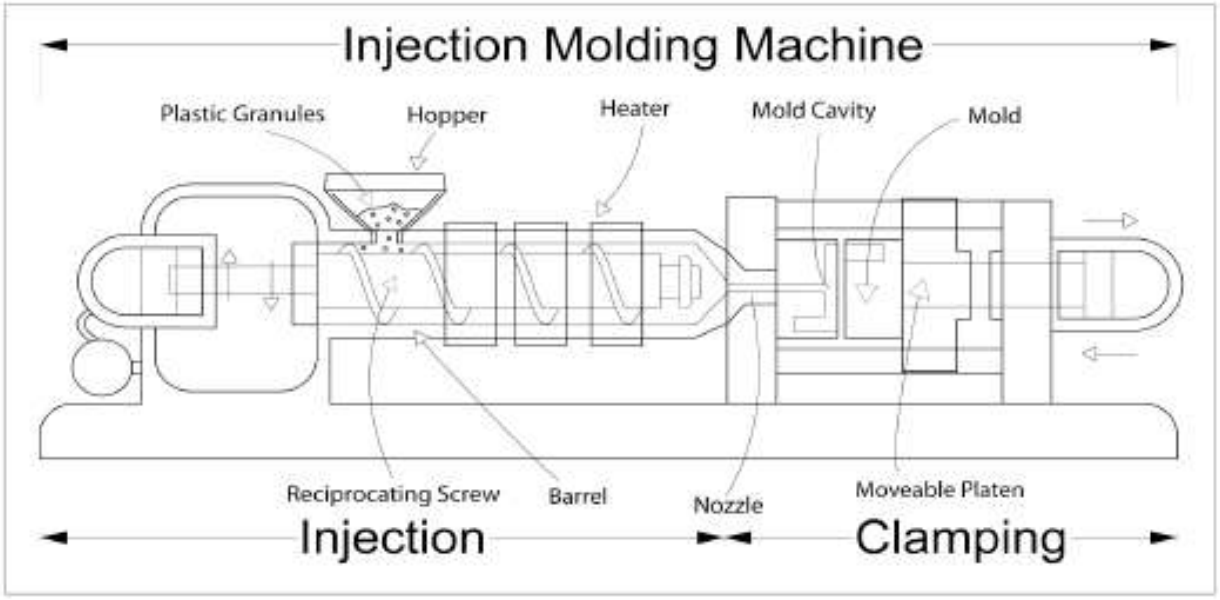


Figure 1: Schematic illustration of a typical injection molding machine [12].

How to submit the report?

- You must submit everything electronically to the turnitin system (http://www.turnitin.com/)
- No hard-copy document will be accepted! Do not give it to secretaries or faculty members.
- Paraphrase sentences or properly cite everything you take from other resources including web pages.
- Turnitin also checks the previous summer practice reports!

What does turnitin give?

GENERAL INFORMATION ABOUT ERDEMİR

History of Erdemir:

picture 1

In 1950s when industrial production had begun to outweigh the economy, major changes were experienced in economic and social structure of Turkey. Urbanization rose during the period along with rising agricultural loans, accelerated highway and dam constructions, irrigation works, the need for flat steel were increased in myriad fields, such as tins, pipes, wagons and agricultural tools. It was nearly impossible to meet this need with foreign reserves which were gradually decreasing due to major investments ventured.

In 1954, the requirement of a national iron and steel industry was brought to the agenda through a committee established consisting of representatives from relevant ministries leading by Sümerbank. Afterwise, in 1959, a feasibility study was initiated by Koppers from USA by the assistance of a committee established by the Ministry of Industry, along with studies on the status of the company that was going to be established. Koppers Associates SA, İş Bankası A.Ş., Demir ve Çelik İşletmeleri Umum Müdürlüğü (General Directorate of Iron and Steel Enterprises) and Ankara Chamber of Commerce and Industry were among the founders of the company which would produce flat steel. Through a protocol signed at the end of 1959 by these companies, an entrepreneur committee was selected to issue draft bills, Founders' Agreement and Articles of Association in order for the Company to be established.

Ereğli Iron and Steel Company(ERDEMİR) was established offically to enhance iron and steel industry, in addition; improve and establish new industry branches in Turkey on May 11,1960. Excavations and construction of Erdemir were started in 1961 and completed after 42 months. Erdemir began production of crude steel and flat steel on May 15, 1965. Crude steel was produced with a capacity of 0.5 million tons/year and flat steel was produced with a capacity of 0.4 million tons/year on May 15, 1965.

In 1972, intermediate expansion works were completed. As a result of this, the capacity of crude steel production was became 0.8 million tons/year. In 1978, after stagel expansion was completed, the capacity of crude steel production raised to 1.5 million tons/year. In 1983, stage2 expansion was finished and the new capacity of crude steel production was became 1.7 million tons/year. In 1987, complementary expansion was completed and Erdemir reached 2.0 million tones/year crude steel production capacity. In 1996, the Capacity Expansion and Modernization Investments (KAM I and KAM II) was completed. As a result of this, the new capacity of Erdemir became 3.0 million tons/year.

In 1998, new harbor facilities were put into service. This harbor is one of the biggest harbor of Black Sea and the largest harbor of Turkey on Black Sea coast. In 1999, tin and chrome plating was started up producing. In 2001, galvanizing line was started up producing. In 2006, the first plate mill of Turkey started up producing. In 2008, the new Ayşe (the name of blast furnace) was re-constructed and replaced the old Ayşe by Erdemir's workers and engineers.

In addition to capacity expansions, we transformed into a group of companies by establishing new companies according to growth strategies and performing of Erdemir acquisitions in domestic and outside markets.

Leading by Ereğli Demir ve Çelik Fabrikaları T.A.Ş., Erdemir Group incorporates Erenco (Erdemir Mühendislik Yönetim ve Danışmanlık Hizmetleri A.Ş.) and ERDEMİR Çelik Servis Merkezi established in 2001, Erdemir Romania S.R.L., İsdemir (İskenderun Demir ve Çelik A.Ş.) and Çelbor Çelik Çekme Boru San. ve Tic. A.Ş acquired in 2002, Erdemir Lojistik A.Ş., and Erdemir Gaz San ve Tic. A.Ş. established in 2004 and Erdemir Madencilik San. ve Tic. A.Ş. acquired in the same year. Erdemir Group has been carrying on its activities since February 27, 2006 with the guidance of OYAK's experience at international markets, financial power and modern management principles as one of the biggest groups of Turkey.

What does turnitin give?

Summer Practice Report

ORIGINALITY REPORT

%42	%40	%4	%19
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	en.erdemir.com.tr Internet Source	%20
2	www.atozwelding.co.za Internet Source	%6
3	Submitted to Koc University Student Paper	%5
4	austwelding.com.au Internet Source	%4
5	en.wikipedia.org Internet Source	%2

Web page

- All documents and/or links to documents are available in our web page

  http://eng.ku.edu.tr/

- Follow the link: Academics/Mechanical Engineering/Undergraduate Degree/Summer Practice

- https://eng.ku.edu.tr/en/academics/mechanical-engineering/undergraduate-degree/summer-practice/

Question?