

Report Abstract – TD5 – MP S3 2022

1. Report Abstract: Definition & Tips

1.1 Purpose and Audience of the Abstract

Usually the purpose in writing this abstract is to get a paper/poster/film accepted for a presentation at a conference. The abstract is the first, and maybe the only, opportunity to persuade the review committee that the proposal deserves to be presented.

In your case, the people who will be reading your abstract are the members of the jury attending the oral defense (viva voce) of your project and internship. The abstract consists of a paragraph of about 10 lines long (200 - 250 words). It is usually located immediately at the beginning of the report.

1.2. Basic Components of a Report Abstract

An abstract must condense your entire report into just one paragraph. The three main components of an abstract are:

1. WHY? Context & Missions

Start with one or two sentences which clearly expresses the problem and needs of the company/lab: what was the problem and the goals/objectives of the project to solve it? Without this context, the purpose of the project is not clear. Then your different missions should be described.

2. HOW? Actions & Methods

What did you do and how did you do it? Briefly review the methodology, tools, means you used to reach the goal of your different missions. You should then be able to answer the “what for” question: what is this method used for?

3. WHAT? Results (or findings) & Conclusions

Concisely but adequately summarize your main findings. What did you discover in your work? Outline what is significant or useful in your project for the company. What do your findings mean?

For each of these components you are walking the fine line between giving enough information to be clear and informative and staying below the word limit for the entire abstract.

1.3. Qualities That Make a Good Abstract

A good abstract is:

- **Concise, with a clear flow** — should answer the 3 main questions (why, how, what) and be structured with linking words
- **Self-contained and accurate** — references to name of author, date, should not be cited here. Trade names, acronyms, abbreviations, or symbols. You would need to explain them, and that takes too much room. The reader should understand your point without having to read the whole report.
- **Non-evaluative** — do not add personal opinions about the value of your work. No personal outcome. Avoid redundant and subjective qualifying adjectives.
- **Readable** — the jury may read dozens of abstracts in a sitting; if your abstract has stilted sentences, misspellings, faulty grammar, poor transitions, or fuzzy logic, it will not be viewed favorably. Use the automatic spell check and the ‘*grammarly*’ application too.

References Marquardt, Anne-kathrin. *Exercices Pratiques Pour Mieux Rédiger En Anglais Dans Le Supérieur B2-C1*. Paris: Ellipses, 2019. Print.

Weblinks <http://advice.writing.utoronto.ca/types-of-writing/abstract/>

Content adapted to the Applied Physics and Measurement Engineering Department, University Institute of Technology, Bordeaux University.

2. Report Abstract: Writing Techniques & Exercises

2.1. Tense and pronouns

2.1.1 Tense

The abstract should be written in the past tense (preterit, NOT present perfect) because the actions already occurred. However, statement of facts in, say, the results and the meaning of the findings, can be provided in the present tense.

2.1.2 Pronouns

The first person singular “I” is rarely used. The first person plural “we” can be used to refer to a group of authors or a project team. Still its use is also rare.

Personal pronouns tend to be deleted in favour of impersonal structures:

- Examples of code **can be found** in the appendix (instead of “**you can find** examples of code in the...”)

Hence the extensive use of passive voice.

Avoid these pronouns with passive structures such as

- “I was given the task of creating X (a web page)”
- I was required to create ...

Even with active structures!

-Our responsibilities included...
-My role consisted in (+VB-ing) / of + noun) e.g. “my role consisted mainly in testing... / of the development of..”
-We had the responsibility of writing...

2.2 What voice should be used then?

Passive voice is used to avoid expressing the identity of the person in charge of the process. It is meant to highlight the task itself, the object itself.

Passive voice and impersonal structures are then preferred, particularly in scientific and technical writing. But excessive or systematic use of passive voice can lead to generalized and weak sentences. Make sure you identify the role and relevance of both voices.

2.3 Language and style

Avoid beginning with a sentence that announces the topic or the purpose of the paper, be it with active, passive or infinitive forms:

Active	Passive	Infinitive
We discuss the conception, creation and maintenance of a local area network (LAN)...	An updated tabulation of intrinsic silicon’s optical properties is presented.	The purpose of the present work is to propose a process for ...

Get to the point by introducing the context directly. Then you can describe the specificity of your work within this context.

The report or its various sections can be used as actors with the following verbs (e.g. “This report presents”; “The results show”; “This paper concludes by”)

General	Rapid	In-depth	Judgement	Specific	
(to) present	<i>outline</i>	<i>examine</i>	<i>assess</i>	<i>describe</i>	<i>calculate</i>
(to) show	<i>highlight</i>	<i>explain</i>	<i>criticize</i>	<i>compare</i>	<i>report</i>
(to) discuss	<i>summarize</i>	<i>analyse</i>	<i>evaluate</i>	<i>emphasize</i>	<i>propose</i>
(to) describe		<i>develop</i>		<i>determine</i>	<i>stress</i>
(to) consider		<i>study</i>		<i>underline</i>	
(to) indicate		<i>investigate</i>			

These verbs can also be used in the passive voice.

Other useful sentences

Analysis of the data indicates that...	Further analysis shows that
... provides an explanation of...	The example of ... illustrates the behaviour of ...

2.4 Exercises on im/personal structures and voice.

Marquardt, Anne-Kathrin. *Exercices Pratiques Pour Mieux Rédiger En Anglais Dans Le Supérieur B2-C1*. Paris: Ellipses, 2019.

Improve the impersonal structure of these three sentences

a- We can say it is clear that mass extinction poses a great threat to biodiversity on our planet.

.....

b- We should emphasize that biodiversity is hugely important.

.....

c- We find it difficult to assess the damage done by this pollutant.

.....

Translate these two sentences into the other voice.

a- On a utilisé le logiciel Multisim pour concevoir notre circuit.

.....

.....

b- Nous avons vérifié le rendement Faraday grâce à un électrolyseur.

.....

.....

.....

2.5. Replace the different paragraphs in the right order

A The main goal of this study is to utilize a natural low-cost material as an accelerator additive to enhance the chemical treatment process using Alum coagulant and Perlite and Bentonite as accelerator substances.

B The removal ratio for conductivity, turbidity, BOD and COD for Perlite was 86.7%, 87.4%, 89.9% and 92.8% respectively, and for Bentonite was 83.5%, 85.0%, 86.5% and 85.0% respectively at the same concentration of 40 mg/l for each. Perlite gave better performance than the Bentonite effluent.

C This paper presents the results of the analyses of leachate treatment from the solid waste landfill located in Borg El Arab landfill in Alexandria using an aerobic treatment process which was applied by means of coagulation flocculation theory. Coagulant and accelerator substances were used for accelerating and improving coagulation and flocculation performance. The performance of the chemical treatment was enhanced using the accelerator substances with 90 mg/l Alum as a constant dose.

D Leachate generation is a major problem for municipal solid waste landfills and causes significant threat to surface water and groundwater. Leachate can be defined as a liquid that passes through a landfill and has extracted dissolved and suspended matter from it. Leachate results from precipitation entering the landfill from moisture that exists in the waste when it is composed.

1	2	3	4

2.6 Analysis & improvement of former students' internship abstracts

Comment these two abstracts. Is the structured respected? Why and how can they be improved?

Materials Engineering and Physico-Chemical controls

Résumé

Le groupe Continental Automotive conçoit et assemble des équipements électroniques automobiles qui, avant d'être vendus à travers le monde, doivent être testés par différents programmes de tests. Les produits disposant d'une fonction d'émission ou de réception RF doivent passer des tests RF en production. Le test RF nécessite l'utilisation d'une antenne boucle qui doit être placée à une position optimale sur le produit sous test. L'objectif de ce stage était d'expérimenter des antennes boucle de différentes tailles, afin de déterminer si une antenne plus petite que celles utilisées actuellement fonctionne mieux pour les fréquences Bluetooth que celles actuelles. Ce stage s'est déroulé en deux temps. La première étape était de fabriquer des antennes de différentes tailles et de tester un produit avec chacune d'entre elles ainsi qu'avec un analyseur de réseau. La deuxième étape visait à faire des tests sur un banc de test RF en faisant des répétibilités pour vérifier la stabilité des antennes. Trois tailles d'antennes ont été expérimentées, l'antenne actuelle et deux plus petites. Les tests sur le produit avec l'analyseur de réseau ont permis de caractériser le meilleur positionnement de chaque antenne et d'avoir une première idée de leur stabilité. Ensuite, les tests sur le banc de test RF ont montré qu'une des petites antennes ne fonctionnait pas correctement ; les valeurs obtenues étaient trop faibles. Les valeurs obtenues pour la plus petite antenne étaient bonnes et étaient bien stables. Cette antenne sera donc essayée en ligne de production dans quelques temps.

Abstract

Continental Automotive Group designs and assembles automotive electronics which, before being sold worldwide, must be tested by various test programs. Products with RF transmit or receive function must pass RF tests in production. The RF test requires the use of a loop antenna that must be placed in an optimal position on the test product.

The objective of this internship was to experiment with loop antennas of different sizes, in order to determine if a smaller antenna than the ones currently used works better for Bluetooth frequencies than the current ones.

This internship took place in two stages. The first step was to build antennas of different sizes and test a product with each of them as well as a network analyzer. The second step was to test on an RF test bench using repeatability to check the stability of the antennas. Three antenna sizes have been tested, the current one and two smaller ones. The tests on the product with the network analyzer allowed to characterize the best positioning of each antenna and to have a first idea of their stability.

Then, the RF Test Bench tests showed that one of the small antennas was not functioning properly; the values obtained were too low. The values obtained for the smallest antenna were good and stable. This antenna will therefore be tested on the production line in a few times.

Résumé

Le secteur industriel est soumis à une législation stricte. Les industries doivent respecter les réglementations et normes de qualité en vigueur et assurer la performance de leurs produits. Pour satisfaire ces besoins, la Société Générale de Surveillance (SGS) propose des services de contrôle. Les laboratoires d'essais mécaniques permettent entre autres de certifier la fiabilité des matériaux et de répondre à la question suivante : « Le comportement du matériau face à une action mécanique extérieure est-il adapté à son usage ? ». Les objectifs de ce stage ont été de prendre part à la réalisation des essais mécaniques d'un laboratoire de SGS et de rédiger des modes opératoires facilitant la transmission du savoir-faire.

De nombreux types d'essais ont été découverts et les étapes de leur déroulement ont été identifiées à travers l'observation du travail des professionnels. Une autonomie dans la réalisation des essais a progressivement été mise en place grâce à l'association des notions acquises à l'IUT Mesures Physiques et de la technique transmise par les techniciens. Les rapports d'essais ont été rédigés en tenant compte des attentes du client. La conception de modes opératoires a été l'aboutissement de l'apprentissage et du respect des normes et des cahiers des charges.

L'importance des services de contrôle a été mise en évidence par les missions du stage. La réalisation d'un essai permet de déterminer les caractéristiques mécaniques d'un matériau et de valider ou non la conformité d'un produit. En cas de résultats non conformes fournis dans le rapport d'essai, l'industriel doit adapter sa chaîne de production. Les modes opératoires rédigés pourront aider à la formation de nouveaux techniciens d'essais et servir d'aide-mémoire.

Abstract

The industrial sector is subject to strict legislation. Industries must comply with the regulations and quality standards in force and ensure the performance of their products. To satisfy these needs, the company named Société Générale de Surveillance (SGS) offers control services. Mechanical test laboratories make it possible, among other techniques, to certify the reliability of materials and to answer the following question: "Is the behaviour of the material submit to an external mechanical action suitable for its use?". The objectives of this internship were to take part in the performance of mechanical tests in an SGS laboratory and to write operating procedures facilitating the transmission of know-how.

Numerous types of tests were discovered and the steps in their execution were identified through the observation of the work of professionals. An autonomy in the realization of the tests was progressively set in place thanks to the association of the notions acquired at the University Institute of Technology and the technique transmitted by the technicians. The test reports were written taking into account the client's expectations. The design of operating procedures was the result of learning and respecting standards and specifications.

The importance of testing services was highlighted by the internship assignments. The performance of a test makes it possible to determine the mechanical characteristics of a material and to approve or reject the conformity of a product. In the event of non-conforming results provided in the test report, the industrial company must adapt its production line. The operating procedures written may help in the training of new test technicians and serve as a memory aid.